

January-February 1995

approach



Junior TACCO loses control of his crew, page 4

Tomcat crew ejects. Film at 11, page 20

You need to be more aggressive, page 40



CHANGES

The good news is we survived! The bad news is that we are combining magazines and going bi-monthly. Remember the April 1994 issue and my stirring editorial, "There's More to 'Fight Like You Train'"? I admonished us all to make do with what we have in these times of downsizing. Well, we in the Naval Safety Center's publications branch now find ourselves penciled in on the same flight schedule. Our budget is tight and will remain so for the foreseeable future.

Safety Center publications, as occasionally happens, are under the microscope and are subject to reductions, particularly in our publishing schedule. This 48-page issue of *Approach* will be the magazine's last solo issue for a while. Beginning with the March-April issue, *Approach* and *Mech* will become one magazine, appearing every other month. (In the 1950s, *Mech* was a section in *Approach*). Remember my quoting George Santayana in my May editorial about reliving the past?

This new format will allow the aviators and mechs to share each other's experiences.

We expect the usual calls from frustrated librarians telling us how we have mixed up their cataloging systems. We'll be more interested in the response from the squadron cockpits and ready rooms. Tell us what you think of the new arrangements.



Peter Mersky
Assistant Editor

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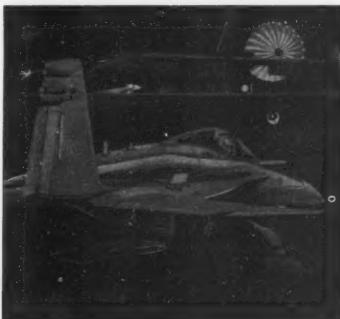
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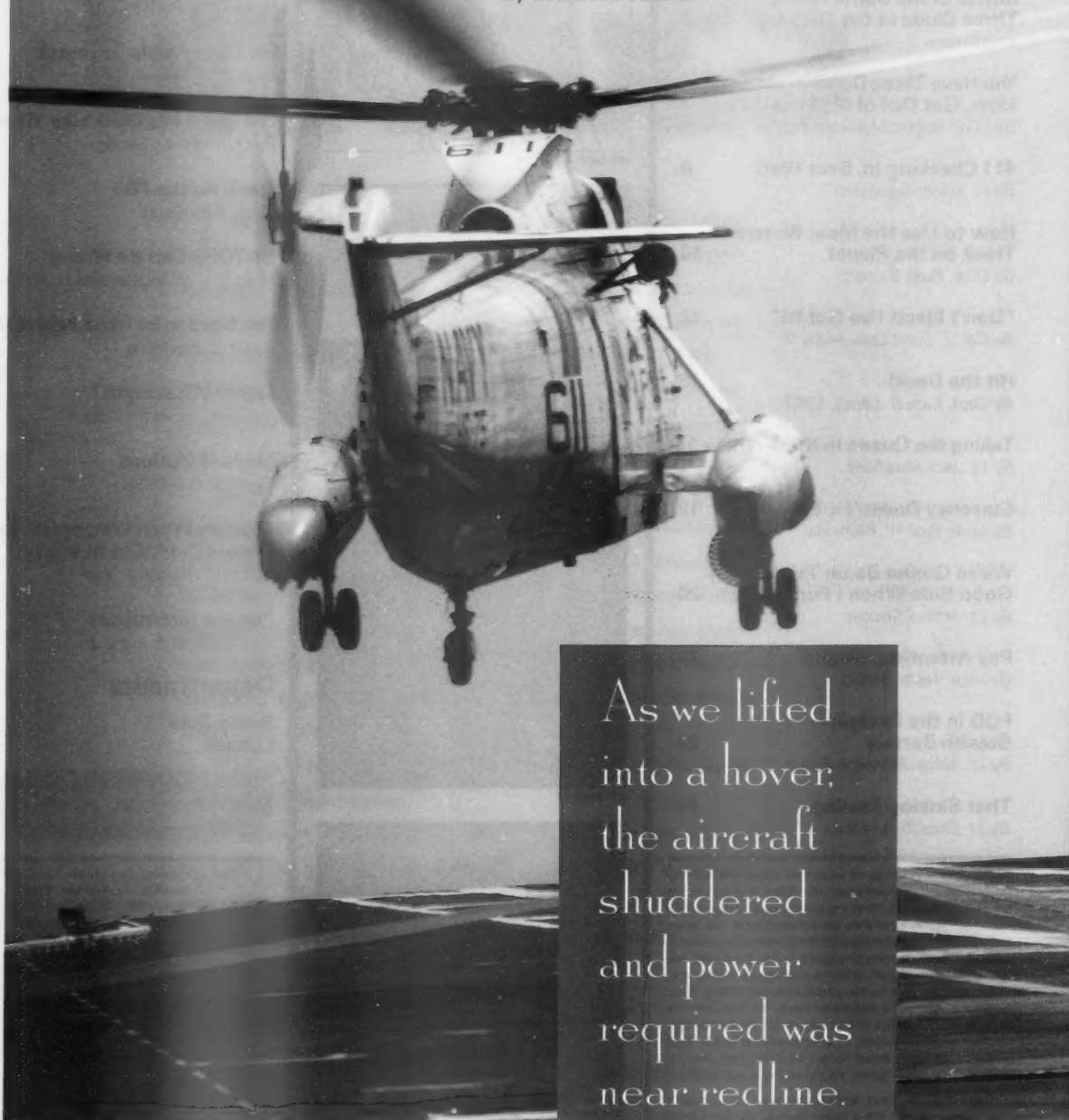
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On the cover: a SAR swimmer jumps from an HH-60H of HCS-5. (Photo by Rick Mullen, 1994 *Approach* photographer of the Year)

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Almost More Than We Could Handle

By Cdr. Mark Vollmer



As we lifted
into a hover,
the aircraft
shuddered
and power
required was
near redline.

I had left the carrier far behind, especially in my thoughts. I'd flown off five days ahead of its scheduled return to Atsugi, my "good deal" for the cruise. My HAC and I had an uneventful six-hour flight through Japan, with one refueling stop at Iwakuni. Now my wife and I were waiting on a MAC flight headed due south for Christmas and New Year's in the Philippines.

Not so fast!

A call late that night, a meeting the next morning at the CAG beach det, and the following day we were on our way *back* to the ship. It was to get underway for possible combat operations, and they needed our SH-3G.

My squadron was permanently forward deployed, with four Sea Kings onboard the CV. The HAC I had flown home with had already left for CONUS on leave, so another HAC was assigned. I respected his judgment and ability. We briefed the next morning at 0500, and I preflighted while he filed the ICAO flight plan with the Japanese base ops. We had 11 passengers and their gear, as well as an aux tank filled to the brim, plenty of fuel to get to our refueling stop at Iwakuni.

As we lifted into a hover, the aircraft shuddered and power required was near redline. It was a nice winter day, with a high overcast, and we slowly climbed up to the airway. Ten minutes later, the HAC's attitude gyro rolled to 45 degrees AOB and died. Ahead, we could see the ceiling and mountains come together. I suggested going back to fix his gyro, but we decided to continue. We would turn around if we went IFR. After all, the ship needed us.

Thirty minutes later, we tried transferring fuel from the aux tank into the main tanks. Nothing. The ceiling came down, and so did the OAT. Center kept sending us higher and higher, up to our maximum altitude, which used more fuel.

Finally, we decided we would be better off to go VFR. With one bad attitude gyro, IFR weather ahead, and possible icing, it seemed like a good call. In hindsight, it wasn't. We should have turned back, but our

desire to get to the ship for real-world ops drove us on.

One hour later, we were, if not lost, bewildered. Many of the Japanese nav aids are VOR/DME only, and we had a 20-30-knot headwind, so it was hard to gauge movement relative to the station. We started getting low on fuel, and the weather was getting worse. We were also unsure of our position. We finally did the right thing.

With about 30 minutes of fuel left, we climbed just high enough to contact Center. After several calls, we convinced the Japanese controller that we were in trouble and needed to land ASAP. He climbed us into the worst rainstorm I ever hope to see, then vectored us to an airfield where the approach end ran out into the water.

Since I had the good gyro, I shot the approach as the HAC backed me up with altitude calls. At decision height, we were still in the goo. So, being over water, we descended to 100 feet AGL, where we broke out and landed.

As we taxied in, the HAC suggested that we cold pump and take off in another hour! With all that had happened, I was stressed out for the day and argued to RON, which we did. The next day dawned bright and sunny, and we made the flight to the ship without any problems.

The weight-and-balance book on the ship showed that we had launched 500 pounds over max gross weight, which accounted for our high power required, high fuel flow, and slow climb rate. The HAC's attitude gyro gripe, fuel stuck in the aux tank, and numerous other small gripes, combined with the bad weather and mountainous terrain, were almost too much for us and our helo to handle. By deciding to go just a little farther, we let ourselves get sucked deeper and deeper into a hole.


Ironically, two days later, the threat operations ended, and the ship headed home. No, I didn't volunteer to fly off! ◀

Cdr. Vollmer was with HC-1 at the time of this story. He is currently assigned to HSLWGLANT.



From the Academy Award *Three Clods*

Anonymous



I looked toward the huge fountain in the courtyard of the BOQ in Roosevelt Roads. I had a serious problem: my PPC, 2P and navigator were cavorting in the water, stark naked, at 0400, eight hours before we were to preflight. How drunk were they? How would we answer the call when asked to fly a 12-hour mission? I didn't have the answers to these questions as they raced through my mind.

Let's backtrack to CONUS, a few days earlier. We had recently returned from a six-month deployment and, after a short stand-down, the squadron had begun a busy ready cycle. However, according to the wing, it looked as though Friday would be quiet and our chances of launching were remote. The crew secured to quarters after the preflight, and everyone settled in to what we thought would be a nice long weekend.

Half an hour after I got home, the phone rang. The duty officer told me to pack my bags for at least a week, and to hurry because the skipper wanted the plane in the air within a couple hours.

We got a quick brief from the wing. The skipper came out to the plane to wish us good luck. He emphasized the mission's importance and tried to convince us that this was a

Winning Movie of the Same Name:

in the Fountain

good deal. He said we should be proud to represent the squadron. We were proud to represent the squadron. We were one of only two junior crews (back then, each squadron had 14-15 O-4s), we had two full operational deployments under our belts, we had conducted several real-world ASW missions, and had the highest current OSE average. Nevertheless, as the mission commander, I knew that the crew's attitude was different this time. These guys were not happy and made no bones about not wanting to go.

After we flew to the det site, the PPC, Nav, and I went over to debrief while the rest of the crew buttoned up the airplane for the night. We received an interesting welcome from the duty officer: they had not expected us until Saturday night or Sunday morning. They had nothing for us to do. To make matters worse, instead of giving us a little time off to familiarize ourselves with the surrounding area, they decided to put us on a ready alert status.

It was around 2230, and we had to pre-flight the plane at 1200 the next day to assume the one-hour alert. My first thought concerned how the others were going to take this news, especially considering how enthusiastic they had been in the first place. On the transit flight, some of them had said that they thought it was a bad deal, but at least they were going to keep busy and do some good ASW.

After making sure the enlisted crew and support personnel were taken care of, we adjourned to the O Club, which was just about to close. We had time to make one order. All of us ordered a couple beers while the PPC ordered three of those heavy-duty tropical drinks with the little colored umbrellas in them. We downed the drinks quickly and headed to the BOQ. It was nearly midnight, but, amazingly, we still had quite a bit of steam to release. The Nav quickly located the BOQ beer machine, and the rest of the officers enthusiastically followed. I decided to hang around the BOQ office and show my watch to the attractive civilian woman behind the desk.

Three or four hours later, I heard loud laughter and wild shrieks of delight. I presumed the crew members had stopped drinking and were just hanging around talking, but they were actually raising hell in the fountain just outside the BOQ and still guzzling beer. I quickly bid farewell to the BOQ clerk and ran out to squelch the noise. What I found was not encouraging. The PPC was staggering, and the 2P and Nav were not far behind, although they seemed to be in good condition. They claimed to be trying to get the PPC to bed. The 3P, with all of three months' experience, had gone to bed much earlier. I hoped that by getting them all to sleep as quickly as possible,

...if I got through this mess, the entire crew would sit down and have a long talk.

when the time came to preflight, we would all be ready to answer the call. I also hoped to win the lottery...

I had the privilege of sharing a room with the PPC. At about 0900, he woke up, gulped down a Pepsi to relieve his dehydration, then vomited all over his bed and himself. I realized the magnitude of the problem: he couldn't even make it to the head, let alone preflight an airplane for a possible launch in a few hours.

I had two options: I could call the ASWOC and tell them we were unable to comply with our tasking, or leave this guy in bed as long as possible and hope that if we did launch, it would be later in the day, and he would be ready to fly. The other officers and I discussed the options (the beginnings of TQL) and chose the second course because things were quiet and the chances of launching were slim. The fact that I might have to tell the ASWOC we could not go weighed heavily on my mind as we proceeded to the aircraft for our preflight.

As a crew, we were proud of our past accomplishments. We couldn't imagine telling the wing that we could not do this mission, and we didn't relish the reaction we'd get from the enlisted folks if they knew the situation.

We preflighted, but the ASWOC briefing officer told us to secure to quarters for what looked to be a quiet Saturday. I felt better at this point. Naturally, I was relieved when I was told there was a slim chance of launching and that things should be rather quiet. I kept telling myself that if I got through this mess, the entire crew would sit down and have a long talk. Feeling the weight slowly lift off my shoulders, I boarded the plane to tell the others about our tasking.

As I was passing the word, I heard the distinctive sound of another P-3. The briefing officer hadn't told us we were going to be

joined by another crew. I thought it must be another squadron here for something else. As we realized the new arrival was one of our P-3s, I heard one of the officers ask, "Now what do we do?" Good question! All I could think about was our PPC's condition, and what the newly arrived crew might (or would) find when they checked in. The extra hours the PPC had slept might have helped.

I greeted the crew. Their lieutenant commander MC told me that he now had the con. I gave him a quick-and-dirty tactical picture and told him that the plane was full up and ready to go. (Note that I craftily talked hardware, not personnel.) I said that we were just on our way back to the BOQ.

Unfortunately, while we exchanged pleasantries with the other crew members, and unbeknownst to me, the MC immediately took off to the BOQ to begin checking in. At the same time, our PPC was trying to escape the stench of his room and get the attention of the maids. He ran right into the MC. According to our PPC, the MC could not find a phone quick enough to call homeplate and blow the whistle. You can guess the rest.

We were extremely lucky. First, we never did have to fly, because the target never showed up, and the det was disestablished the next day. Second, we were able to keep the incident in-house and not embarrass the squadron. Third, although our careers were not ruined, we got what we deserved from the Ops O and CO the following Monday.

As the MC, I could have broken the chain of events leading to this potential disaster several times. However, I ignored the warning signs—the planeside brief when the crew's morale was in the dirt, the PPC ordering three potent drinks followed by the visit to the beer machine, my spending the early morning hours talking to some young female and losing sight of what our real mission was. ◀

You Have Three Down-and-Locked. Now, Get Out of My Face!

By LCdr. Robert McLaughlin

We were near the end of our turnaround training cycle. My BN and I felt comfortable flying together, and we breezed through the admin and crew-coordination portions of the brief for a night low-level in the local area. We'd done this dozens of times.

The FCLP bounce pattern was full, and as we approached the hold-short position, we were No. 3 for takeoff. We requested priority to make our hard IFR entry time for the low-level. Tower complied, directing an aircraft rolling into the groove to wave off and continue upwind. Then the controller cleared us for an immediate takeoff.

Taxiing onto the runway, I had decided to play the all-weather game and make a simulated instrument takeoff. I had been rushed, however, and hadn't told my BN. No sweat.

Full power, taxi light off (don't want to blind the LSO's good eye), and we were rolling.

"Off the peg," my BN called, noting refusal and takeoff speeds. Airborne, gear coming up, 185 knots, flaps and slats moving.

Still on instrument scan, I was thinking, "Pretty easy stuff."

Then, that little voice inside me started talking and grabbing my attention. Something wasn't right. I never heard Tower's call to the preceding aircraft to turn downwind. Where was he? Only when I looked outside did I see the A-6's mainmounts filling my windscreen.

I shoved the stick over, confirmed he had three down-and-locked, and quickly got my BN's attention. We caught our breath and continued with our hop.

It takes one of these episodes to occasionally re-teach some old lessons. Crew coordination and lookout doctrine are more than just phrases to discuss during a brief. ◀

LCdr. McLaughlin flies with VA-52.

**I never
heard Tower's
call to the
preceding
aircraft
to turn
downwind.**



It was a dark night at the boat. I was out on a 2 v 2 AIC (what else is new) in the Arabian Gulf, enjoying the last few minutes of peace before checking in with Strike. It was the same as every other night during the past month, except for one minor problem: I had to urinate.

Normally, when confronted with this situation in the past, I've opted for delayed gratification and held it, praying I didn't bolter. This time was different; I really had to go. After a couple of near-midairs, I found my trusty old piddle-pack. I usually don't use this contraption, and I was especially inept in the darkness with an inoperative Grimes light. You can probably guess. My CEP that night wasn't up to snuff, and I ended up soaking myself. Now I was mad.

I made a feeble attempt to use the sponge to soak up the mess, to little avail. So I cut my losses, put everything in my nav bag, and answered the calls from Marshal.

In the marshal stack, I tried to forget my predicament. It was a gorgeous night, and there wasn't anything to disrupt my view. Wait a minute. There's nothing to disrupt my view? Where are the 11 other planes I launched with?

"406, 411," I called my wingman.

"411, go."

"What are you showing for your course line?"

"Three zero zero. Why?"

"No reason."

I was 100 radials away from the rest of the air wing (which at 30 DME is about 50 miles, I think). I had six minutes until my push time. Using what little extra gas I had, I selected full burner and hoped that everyone in CATCC wasn't placing bets on whether or not I'd make it.


Thanks to the F/A-18's impressive acceleration, I made it abeam the push point 20 seconds early, 550 knots, 180 out. Thanks to the equally impressive bleed rate of the two-tank Hornet, I pushed five seconds late at 280 knots.



What did I learn from this fiasco? The first lesson was to compartmentalize. I let myself get distracted to the point that I added 120 to 180 and came up with 200. The second lesson was to write everything down. If I had written the radials down, I wouldn't have embarrassed my third-grade math teacher.

The final lesson was if you've screwed up, don't put yourself in a worse situation by doing something else stupid (like a 7-G, vertigo-inducing bat turn at night at your push point). 'Fess up if you can't make it safely, and take the hit to your ego. It just ain't worth it. ◀

Lt. Hagenstad flies with VFA-195.



*This time was
different; I really
had to go...*

By Lt. Kevin Hagenstad

CKING IN, SEAT WET!

How to Use the Most

Bizarre Track on the Planet

By LCdr. Russ Bartlett

Trying to maintain a healthy lifestyle while doing "hard time" on the ship challenges the determination of even the most disciplined aviator. Let's take a look at a quality aerobic workout that is often overlooked by all but the most stubborn athletes... a run on the flight deck.

It's not as difficult as it seems to get up there for a run, once you know the secrets.

First, a warning. As running surfaces go, steel is even less forgiving than asphalt. If you have knee or shin problems, it's probably not advisable to start an aggressive running program onboard the ship. Running on the roof is tough on your muscles and joints. Buy a high-quality pair of running shoes and give yourself a chance.

OK, so you've decided to give it a shot... but when?

A successful run starts with a thorough scan of the airplan the night before. Without a doubt, mornings (prior to flight operations) are the most reliable times to squeeze in a run (other than no-fly days, of course).

Note the time of the first launch. You can expect crews to start their man-ups 45 minutes before, with the "proper flight-deck uniforms" call between then and 30 minutes prior.

Make a note of when the FOD walkdowns will be held. It's a real nice gesture to plan your run so that you finish when the FOD walkdown is called.

A couple of airplan "gotchas" are the lone "big wing" launch at sunrise and Vertreps. Either of these will throw a wrench in the works. I haven't been on a ship yet that booted me off the roof for standard helo operations. Usually the Boss asks runners to stay on the bow while the helo is doing its up-and-down thing on the angle.

Before heading up to the roof, a quick PLAT check is usually advisable. It's the closest thing we have to being able to look out the window. The flight deck is a very slippery and inhospitable place when it's raining. When it is raining, it might be best to find a Lifecycle instead. High winds may also be a factor. Usually, no one will bother you as long as the winds are less than 35 knots.

Just because it's recreation doesn't mean you shouldn't take some safety equipment with you. At a minimum, always bring ear plugs. Chances are good that someone will need a maintenance turn while you're up there. That doesn't mean you have to leave. Honor their space and protect your ears.

Sunglasses are always part of my running attire, even if it's not sunny, for several reasons. First, they protect your eyes from the flying foam of waterless cleaners. It's almost guaranteed that every plane captain along your route will spray his aircraft just as you approach his position. Secondly,

should there be some sort of emergency, or perhaps just debris in the wind, your glasses provide considerable impact protection for your eyes. Many sports-oriented glasses by companies such as Oakley and Bolle have ANSI-approved, impact-resistant lenses. When you get right down to it, though, we all know the bottom line on sunglasses: You'll look way cool.

OK, now it's time to go. You've got your best running shoes on, foamies in your pocket, and your specs.

One of the interesting things about running on the flight deck is that your route will be slightly different every day. It all depends on how the aircraft are spotted. Obviously, you can only guess your mileage, which is fine. Simply run for time. By setting goals of a certain length of time, you free yourself of any mileage obsession or necessity to run a familiar route faster and faster each time. (If you insist on mileage, figure 2.3 laps per mile on a nuke, assuming you get the whole deck, bow to stern; slightly more laps per mile for a fossil-fueler).

There are so many obstacles on the flight deck that many people simply avoid them. Please don't forget, there are obstacles to training at home, too. Some people choose to deal with them; others sit on the couch and eat potato chips. Now, let's address specifics.

When non-skid meets skin, skin loses big. Remember, one of your primary goals is to remain upright for the duration of your run.

Avoid the cat tracks whenever possible. They are incredibly slick. Pretend they are ice and you'll be fine. If you must step on or cross them, do it at a 90-degree angle, and don't try to turn while doing so.

You'll find painted surfaces such as the centerline to be much more slippery than standard black non-skid. Don't

ask me how I know. Trust me on this one. Treat these surfaces with respect, just like the cat tracks. When you cross them, be perpendicular, and without significant lateral "G" on your high-speed body.

Exaggerate your vertical clearance of a-gear wires, or consider going around them. The wires may only be several inches above the flight deck when you start your run, but as you get further into it, someone seems to raise them a bit each lap. Beware! As you tire, you may misjudge their height or your leg strength. Either way, you could end up testing the "skin versus non-skid" theory mentioned earlier.

Honor threats. Give aircraft maintenance or alert turns a wide berth. People using nitrogen carts to service landing gear deserve the same respect. Remain well clear of catapult crews conducting "no-loads" and a-gear crews functioning wires. And watch out for those sharp edges on aircraft-control surfaces and missile fins.

Making yourself predictable to those around you is the best way to let them know that you know what's going on around you.

Congratulations! You've not only survived, but enjoyed a great run on the most bizarre track on the planet. As a courtesy to those who are still running, however, consider walking "counter-flow" as you cool down. Doing so will prevent you from cutting someone off at one of the many choke points as he sneaks up from behind you.

Running on the flight deck is a luxury that few of our other underway brethren enjoy. By acknowledging and respecting the dangers presented us and committing to a healthier lifestyle, we can prosper physically and mentally the rest of the day, in fact for the rest of our lives.

See you on the roof! ◀

LCdr. Bartlett is the safety officer for VFA-195.



Author, "Beef" second from the left, during Suez Canal Flight Deck Marathon just before Desert Storm, January '91.



"Don't Eject! I've Got It!"

By Cdr. L. Scott Lamoreaux III

We steadied our Tomcat with the lead in his expected position on the nose. The AWG-9 picked up a contact at 12 miles, 30 degrees right of our nose, with an indicated altitude of 24,000 feet. I immediately noted the target in a descent, as we placed the nose on the target.

My pilot instinctively descended, and called, "Tally-ho," approaching five miles. I gained a "tally" at around two miles, just as my pilot said he would bring the other aircraft down our right side.

At the merge, we passed right to right, then went into the vertical, following our briefed game plan. Shifting in my seat to maintain sight, I saw the other aircraft begin a 20-degree nose-low, left turn, generating what would become a wide one-circle fight.

We started a right roll, through the inverted position, with both my pilot and I momentarily losing sight. Out of the overhead maneuver, my pilot regained sight first, quickly talking me back on the other aircraft now across the circle. We locked the radar onto our adversary just outside of two miles. My pilot squeezed off a minimum-range "Fox One" shot immediately after the lock symbology appeared on the DDD.

I looked out and saw the other Tomcat right of our nose scooping out of its nose-low turn. As we set up for the second merge, I perceived another right-to-right pass developing, with us gaining approximately 20 degrees.

Approaching the merge, our aircraft was approximately 10-15 degrees nose down, slightly right wing down and near one G flight. My perception of the ensuing pass had us crossing above the other Tomcat at about 18,000 feet and maintaining our 20-degree bite. At no time was I concerned that our flight paths might violate the training-rule requirement for a 500-foot minimum separation.

I adjusted my body to maintain sight of the other Tomcat as it began to rapidly move across the canopy. Our aircraft was rocked by what I initially believed was the other aircraft's jet wash "thumping" us. Then I realized that we had collided.

Our aircraft immediately started a rapid roll to the right, establishing an approximately 20-to-30 degree, nose-down attitude

as it rolled through the inverted position. This oscillatory spiral continued for two to three revolutions.

Immediately, I asked my pilot if he thought he could regain control. Hearing nothing but a disturbing silence, I directed him to lock his harness and noted aircraft attitude, airspeed and altitude. My pilot thought the collision had damaged the right horizontal stabilizer and possibly the right vertical tail. He was busy applying full left rudder to counteract the roll. Somewhere between the second and third roll and still receiving no response to my inquiries, I noted airspeed quickly accelerating through 350 knots and our altitude passing 12,000 feet.

I was now concerned about the aircraft's lack of response to control inputs, and worried that we would rapidly find ourselves below 10,000 feet, approaching 450 knots. I thought the aircraft might not be recoverable and called about the need to possibly jettison the aircraft.

The reply from the front seat, "Don't eject, don't eject! Full left rudder. I've got it, I've got it!" was immediate and reassuring. Shortly thereafter, the roll stopped. Passing approximately 7,000 feet and 400-plus knots, we started leveling out with a four-G pull toward the horizon.

As we reached level flight, the aircraft immediately started to squat. Looking over my shoulder, I saw the left wing back at 68 degrees and felt the aircraft begin a slow roll off to the right. I quickly told the pilot to keep speed up and to try to move the wings forward to 20 degrees. The pilot was able to counter the roll and called my attention to the severely damaged right wing stub stuck at 20 degrees.

Using the emergency wingsweep handle, we solved the problem with the asymmetric wingsweep, bringing the left wing forward to match the right at 20 degrees. Struggling to regain our wits, we headed toward the ship, slowed the aircraft to 250 KIAS, extended the

Receiving
no reply
after the
third radio
call, we both
saw a large
white im-
pact area
below...

inflight refueling probe, and began assessing the status of the fuel and hydraulics systems, along with airframe integrity.

At this point, I tried calling the other mishap aircraft for a join-up to check his damage. Receiving no reply after the third radio call, we both saw a large white impact area below and to the right of our nose, approximately 10 to 15 miles away. We saw a black smoke trail rising out of the center. It was only then the thought occurred to me the other crew might not have survived. We didn't see any chutes in the vicinity. (Both aviators did in fact eject and survive.)

I advised Marshal of the situation while my pilot experimented with various trim settings to provide maximum stick authority to counteract the aircraft's tendency to roll. Another sickening glance at the stump of what used to be the right wing and we both concluded that we couldn't recover aboard ship. We reviewed ejection and divert options.

We established overhead the ship, and another Tomcat aircrew assessed the damage. Their visual inspection confirmed the collision had severed more than 10 feet of the right wing, the outboard segment of the leading-edge slat and the outboard main flap. More than 80 percent of the inboard main flap had been torn away, and the right horizontal stabilizer and vertical tail had received fragmentation damage. Thankfully, the aircraft did not appear to be leaking fuel or hydraulic fluid.

Discussions with squadron representatives onboard the ship confirmed fuel requirements for the closest possible divert field—Paya Lebar Air Base, Singapore, 235 miles away.

Heading out to the divert field, we had to deal with a significant fuel split and problems with the aircraft's roll stability augmentation system. The stick force needed to keep the aircraft in near-level flight required the pilot to frequently swap hands. En route, we discussed approach and landing considerations, and reviewed several contingencies: controllability checks, ejection criteria, no-flap and no-slat approaches, field arrestments and blown tires on landing. Approaching the field, we checked controllability and decided

that 175 knots approached the limits of spoiler and rudder authority.

With the field in sight, we set the aircraft up for a no-flap, no-slat visual straight-in, touching down on centerline at 185 knots, approximately 400 feet down the runway. As briefed, my pilot lowered the flap handle to generate ground-roll braking, and I immediately began calling airspeeds and runway remaining markers.

Passing the 4,000-foot marker with just over 100 KIAS, we dropped the hook, successfully engaging the long-field arresting gear.

We walked away with three major lessons. First, approaching 9,000 feet, the pilot must prioritize training rules over tactics and make sure that he has satisfied collision avoidance before concentrating on aircraft tactical maneuvering or weapons employment.

OPNAVINST 3710.7N requires pilots to broadcast their intentions if the direction of pass is in doubt (when operating on the same radio frequency). In this particular engagement, both pilots felt that a clear direction of pass was established until just before impact. However, both pilots perceived opposite directions of pass existed. If anyone had made a "right-to-right" or "left-to-left" call over the radio going into the second merge, they probably would have alerted the other crew that something was amiss in time to take corrective action.

Although not readily apparent, crew coordination was a big player in preventing this mishap from having a more costly and tragic outcome. Crew-coordination issues and individual responsibilities received frequent attention in our crew briefs and debriefs. And, yes, my pilot and I would have done some things differently, but we stuck to our briefed ejection contract, which kept us from stepping out of a recoverable aircraft.

Effective division of responsibilities and teamwork also greatly aided the successful divert. This mishap pointed out, once again, that the time to be trying to figure out how your crew is going to handle an emergency is not when it happens. ◀

Cdr. Lamoreaux is the CO of VF-2. He was with VF-213 at the time of this story.



Hit the Deck!

By Capt. Kent B. Lewis, USMC

McDonnell Douglas Corp.

It was a lovely summer day in July at Twentynine Palms. Talk about good deals. I was part of LFTCPac's Tactical Air Control Party FIREX. Their mission was to train our class to be FACs, a formidable task to say the least.

Each FAC would rotate through stations, giving calls for fire to artillery and mortars, close-in fire support (CIFS) briefs, and nine line CAS briefs, all monitored by instructors.

At midday, two CAS stacks were working north and south of the observation point (OP), each on east-to-west tracks, with the CIFS working from holding areas to attack positions. The arty and mortars provided marks and SEAD. A section of Navy F/A-18s checked in and was passed to our group of controllers. We hacked the Hornets, briefed them, and gave them a time on target. They would use a white phosphorous arty mark and fly a high profile because of a simulated hand-held SAM threat.

Dash 1 called "IP inbound," received a correction from the mark,

and was told to continue. No fancy brevity codes today. Dash 2 called, "IP inbound" soon afterward. Dash 1 descended from 10,000 feet MSL, off target to his left, and got steering corrections to the right to get "eyes on." He corrected, called, "Wings level," and was cleared hot. He released around 8,000 feet MSL, and the Mk-83s hit within 50 meters of the target. Dash 1 was then "cleared for immediate reattack."

The next transmission we heard was, "Dash 2, wings level." The controller gained a tally on the wingman, and directed him to come right, because he was pointed right at us! Dash 2's next transmission was, "Off cold." Now the hairs on the back of my neck were standing up. The FAC asked, "Dash 2, did you drop?" Silence. This was not good.

Do you know what a 1,000-pound bomb looks like when it whizzes by 50 feet in front of you? I found out then, and it's pretty ugly. The bomb hit the ridgeline 75 meters long of our position and exploded as I yelled, "Hit the deck!"

The blast threw several people to the ground, shrapnel and rock fell on us for 15 to 20 seconds. Amazingly, there were only three first-aid injuries and a lot of bruises because most of the blast went down and away from us. What kind of BDA do you give for that?

We were lucky that Dash 2 was a second off that day, because there were over 30 people on the OP. Aircrews must be absolutely sure of all friendly positions before delivering ordnance, and be thoroughly familiar with air-to-ground phraseology. SOPs may not require cold passes, but that does not limit the aircrew's prerogative. Ground controllers must avoid using terminology that can be misinterpreted as clearance to release munitions. The importance of clear, concise communications is certainly as important here as in any other phase of flight. And, if you're not sure, ask! Dash 2 heard and saw what he wanted to that day. How many times has it happened to you? ◀

Capt. Lewis flew Hueys with HMLA-369. He was the air officer for 2D Battalion, 5th Marines. He is currently a T-34C instructor with VT-27.

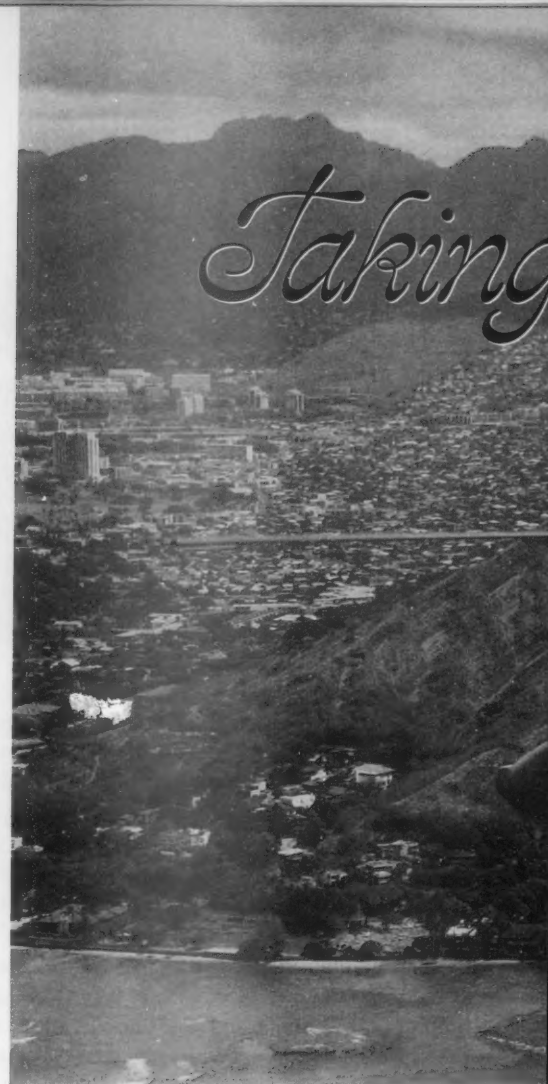
We've all heard the stories...

"A van full of beer met us on the ramp as we shut down... free lobster for all the pilots... a rental car... there's a nursing school nearby." The lore of the airshow is perpetuated by bleary-eyed pilots telling their Monday morning tale of amazing parties and friendly inhabitants to all who would listen.

When the ops boss asked me to post the letter soliciting aircraft for the Shearwater-Halifax Airshow in the briefing room, I knew divine powers had chosen me to be the next airshow saint. All I needed was a crew, route of flight and the skipper's OK.

My 2P and AW were both experienced and well-respected, and the CO decided to let one of the squadron's best ADs in on the good deal. We had the talent and were planning on taking our detachment aircraft, a real flier.

We planned to launch early and timed our nine-hour flight arrival for happy hour. As we checked with Maintenance Control, the duty chief hit me with the bad news: "Your bird is hard down for a ruptured fuel bladder."



When pressed for another aircraft, he said 231 had just come up yesterday and wasn't on today's flight schedule. This helo was the hangar queen, only days away from Spintac and not what you would choose for a nine-hour flight or for static display.

Start-up was just what we expected, engines slow to wind up, bad flight control checks and gear sluggish to slave. We replaced a few boxes and launched just before the field went IFR.

Half an hour into the flight, we were growing accustomed to the 1-per our blade track was providing when the engine-fire light caught our attention.

"It's the No. 2 engine, my side," I thought. "OK, turn and confirm. No sign of fire from the cowling, the gauges look

the Queen to the Airshow

By Lt. Jack Shepherd



normal, and there's no sunlight peeking through this rain storm. It's got to be water in the cannonplug, not an unusual occurrence in the H-2. Well, we're not on fire, but we can't keep flying with a fire-caution light."

Just as we decided to find a field to land, the fire-caution light extinguished. We were back in business!

Taxiing to the line for a quick refuel at NS Northeast, I asked Ground for a hot refuel. Their denial brought my next request for an NC-8 cart for the startup. They rogered my request.

While the aircraft was refueled, we looked for a vending-machine breakfast, then checked the weather. Weather called for VFR up the coast, so we jumped at the chance to file for the low-level route through

downtown New York City. This would save us from certain vectors out to the international shipping lanes and at least an hour's flight time. Plus, it's a great flight.

Heading to the aircraft via the line shack, I planned on rousting the lineman to get the NC-8 out to the aircraft for startup. As I turned the corner into the hangar, I saw our lineman, up to his elbows in grease, and more than 100 parts that at one time resembled an NC-8 cart. I asked the lineman if he could break away from what he was doing to get an NC-8. His response was not what I wanted to hear.

"This is the only one we got."

Knowing I had sluggish engines on startup and what must be a weak battery from

I said, "We're losing fuel!" This put my copilot into a wrestling match with the chart to get a view of the instrument panel.

all that hangar time, I suspected our electrical starter motors were in for a treat. The SH-2F starters were limited to a 30-second start cycle, and as I passed 50 seconds on my second attempt, I saw the Ng crawl to 52 percent—enough to sustain idle. We quickly got the rotors turning and generators on line to give the second engine starter more juice.

The next leg took us north along the New Jersey coast into NYC for a photo opportunity of the Statue of Liberty and a good look at the sights. The NYC VFR low-level route has a strict 300-foot max altitude for helicopters, so we ensured we were well below in the interest of safety of flight.

Soon, the skyscrapers gave way to rolling farmland and clouds. Then more clouds. As we circled an antenna atop a hill at 200 feet AGL, I decided this would be a good time to file an IFR flight plan. While trying in vain to pick up a TACAN, an understanding air controller gave us a squawk and got us out of the cow lanes and on our way.

The last leg of our journey found us dead reckoning along an airway since our GPS didn't work and the next TACAN station was at our destination. My copilot had the VFR chart spread across the cockpit looking for anything to navigate from when I noticed the fuel-gauge totalizer winding down and the sump-tank fuel needle heading for zero. My voice rose an octave higher.

I said, "We're losing fuel!" This caught everyone's attention and put my copilot into a wrestling match with the chart to get a view of the instrument panel. Selecting the aux and main tanks on the display only sent the needle fluctuating wildly. The needle for the sump tank, which feeds the engines, was just about to zero and the totalizer agreed. But the low-fuel light hadn't illuminated. I told everyone to stand by for flameout and prepared to initiate the auto.

The needles hit zero, and in that quiet cockpit, all that was heard was the blissful

whine of those GE engines. Now quite sure the problem was electrical and not catastrophic, I coaxed my heart to dislodge itself from my throat and figure out what to do. I shouldn't continue without an idea of my fuel consumption and there weren't any suitable fields for a divert.

Ten minutes later, my copilot and I were still trying to figure out what our projected fuel consumption was going to be, based on our last fuel reading. Suddenly, despite our troubleshooting, the gauge came back to life. The one thought that kept running through my mind was that I still had to fly this pig back at the end of the weekend!

Final approach to Shearwater-Halifax brought cheers from the crew and a sigh of relief from me. Tower directed us to air taxi to the helicopter display area. As I set up for landing with my lineman in sight, I heard a beeping sound—the landing gear! At the same time, my copilot and I both yelled, "Gear!" while he slapped the gear handle down and I paused before landing on our sturdy radar dome.

Once on deck, we exchanged the we-almost-screwed-up-bad glances and carefully followed the shutdown checklist.

The lineman handed us each a beer and told us how neat it was that we held the gear until the last minute. I said, "Yeah, wasn't it." As we toasted to our successful arrival, I said my own silent toast to the wise men who came up with the unsafe-gear audio warning system. We learned a whole lot more than we bargained for that weekend, and the return trip was more thoroughly planned to include divers and crew responsibilities. Even if you're not taking the hangar queen, cross-country flights deserve all the planning we give our missions at sea—and sometimes more. ◀

Lt. Shepherd flew the SH-2F in HSL-34. He now flies the SH-60B in HSL-44.

Doesn't Currency \wedge = Proficiency

By LCdr. Paul W. Romaine

The ship's Huey was providing SAR support and night-proficiency training that included instrument approaches and deck-landing qualifications (DLQs). The crew launched for day DLQs on an accompanying ship. They returned to their own ship, made several landings just after official sunset, then departed the DLQ pattern for practice instrument approaches. The weather was deteriorating.

When they discovered that they couldn't maintain VFR in the instrument pattern, the crew requested and were approved for a lower altitude. They found VMC and received clearance for the break to practice additional landings.

By now, conditions were overcast with rain, six-foot swells and no ambient light or a visible horizon. The crew of another aircraft in the pattern reported having vertigo brought on by a crosswind on final and no horizon.

The crew of the Huey made their first approach high and fast. The pilot initiated his own wave-off. Another aircraft in the pattern tried to land, but was also high and fast. The LSE waved them off and Pri-fly sent them to the overhead delta pattern while the first crew set up for another landing.

Pri-fly noticed that the Huey's anti-collision lights were off after the waveoff and told the crew to turn on their lights (distraction No.1). There was no response and the lights remained off.

The Huey crew called, "Abeam, right seat," and were cleared to land. Once again the approach was high, and the pilot couldn't attain a steady hover over the deck. This time, the LSE waved them off, and the crew made a normal wave-off up the port side of the ship, but then started to cross the bow.

Pri-fly radioed that they were about to cross the bow (distraction No.2). The Huey's anti-collision lights remained off after the wave-off, and once again Pri-fly told the crew to turn on their lights (Distraction No.3). Again, the crew did not respond or comply. Tower cleared the Huey to turn downwind.

After making a normal turn to downwind, the crew started a gradual descent, which continued until the lower fuselage light reflected off the water. The aircraft climbed to an acceptable altitude at the abeam position, but turning to the base leg, it descended again until its

position lights were no longer visible. It climbed slightly, then went down and crashed into the water.

An air-and-surface search throughout the night recovered the body of one crewman, and the other three men were declared lost at sea.

Investigations showed that the pilot in command had difficulty coordinating crew responsibilities in this demanding environment because of his lack of proficiency in night shipboard flying. Both pilots were current in accordance with UH-1N NATOPS, which only requires two day landings and three night landings every 12 months. (In the previous six months the HAC had six night landings, and the copilot had seven night landings.)

Most pilots probably would not feel proficient with

only five shipboard landings (two day and three night) every 12 months, and yet that is all that is required to stay current. Also, both pilots had relatively low total flight time in the Huey (185 hours for the HAC and 95 hours for the copilot).

Changing the NATOPS to require more landings for currency is one solution, but NATOPS reflects what the community, as a whole, believes is in its best interest. This community did not want to make its NATOPS overly restrictive. Besides, how many times have we heard the saying that, "NATOPS is

not a substitute for sound judgment"? Just because you're current doesn't mean you're proficient.

If this aircrew or the schedules officer had done a little risk assessment, they may have decided to conduct this training on a better night, or to call it quits after the pinky landings. Risk assessment is nothing more than the process of evaluating all the individual risks associated with a mission and then determining if the cumulative risk is worth the potential gain. Your risk analysis will give you several options:

- You can take the mission as proposed.
- You can modify it to make it less risky (substitute a more proficient aircrew).
- You can do the day and the pinky portion.
- You can wait for a better night to do the rest, or cancel it altogether. ◀

LCdr. Romaine is the H-60 and H-2 analyst for the Naval Safety Center. He is also the temporary H-1 analyst.

*...it
descended
again until
its position
lights were
no longer
visible.*

We're Gonna Be on TV!

Get My Good Side When I Punch Out!

By Lt. Jeffrey Strobel

We were
hooting and
hollering,
and enjoying
the day...

It was to be the perfect gedunk flight. My nugget pilot and I were doing an AAW track-ex for the ship, which would include a 2,000-foot supersonic pass for morale purposes, and a 500-foot transonic run for the benefit of the visiting Discovery Channel TV crew. It was the second day of deployment, and we were already looking forward to pulling into Pearl Harbor.

Following a thorough brief, we manned up Ripper 105, which was spotted directly behind cat 3. The pilot and I were psyched about this flight, and we were the first ones to start our engines when the Boss called it. As we went down the cat, we were hooting and hollering, and enjoying the day.

After the launch, we started our first run for the ship's radars. Because of the time, we went to the 2,000-foot supersonic pass. The XO began his run first, and after our run, we'd join for the 500-foot pass.

At 10 miles out, the Boss told the XO that they had a pretty good thump. My pilot (new callsign, "Comet") and I laughed and said we would give a better one. At three miles aft, we kicked in the burners and descended to 2,000 feet. The Boss cleared us in. While we were doing our tracking run, I told Comet to ensure that as we passed the bow in a right turn, to make it a climbing right turn, because I'd read too many *Approach* articles about what were perceived to be level breaks in a flyby but were actually descending turns.

Abeam the ship, we noticed that our airspeed was 635 knots, 1.08 mach. We started our climbing right turn, and as we

rolled right, I felt two heavy, quick thumps. My first thought was that we had flown through the XO's jet wash, which surprised me, because I thought it would have dissipated by then. As usual, everybody started talking at once. I asked Comet what happened, and the Boss asked us what our problem was. Comet told me our right engine had stalled, and the right stall caution came up on my MFD.

I told Comet to level the wings and gently climb the jet away from the water. Then, I told the Boss that our right engine had stalled. He asked if we needed help. But being the polite JO that I am, I courteously asked him to stand by, while Comet recited his boldface procedures to me.

Suddenly, the right wing dropped and then came back up. I asked Comet if he was in control, and he said, "I'm trying." My thoughts at this point were to get some altitude, lose some airspeed, and do a controllability check before making a single-engine, no-flight-hydraulic landing.

Something told me to be ready for anything, so I asked the Boss to send the SAR helo our way.

Comet was doing a great job climbing and slowing down, so I punched up the engine-data page on my MFD to ensure we had the right engine at idle. We did.

As I was reaching for my PCL, our wingman called, "You're on fire!" I told Comet to pull the emergency fuel-shutoff handle. I was just about to tell him to push the fire-extinguisher button when he looked



in his rear-view mirror on the left, saw the whole tail in flames (the Discovery crew caught the whole spectacular thing, from engine blowout to crash, on high-resolution film) and called, "We're on fire. Eject, eject, eject!" We had no cockpit indications of a fire. If our wingman hadn't said anything, we wouldn't have known. I tried to reach the button on my foot pedal to tell everyone we were ejecting, but only got half a word out before I was riding up the rails. I was out of position so I dislocated my right shoulder from the windblast, which blew off my right glove. The canopy SMDC lines burned my unprotected hand.

All of our flight gear worked perfectly, and the crew of Loosefoot 615 from HS-8 made a flawless rescue. I was in the water for less than 10 minutes before being hoisted up.

We had had a brief from our PRs only three weeks before on the NACES seat and its gear. The last crew that had to eject because

of a remarkably similar problem also talked about their ride in the straps, so we were ready when our time came.

So, what did I learn from all of this? Be ready for anything, stay calm, and know your procedures cold. I know I'm preaching to the choir, but there's a huge difference between filling out a boldface exam and being in an out-of-control supersonic jet. Also, any time I feel an unusual engine response, I look outside as well as inside.

Also, when you hear the "E" word, get in position! Six weeks after the incident, my shoulder is still out of whack, and the doc tells me it will take a few more to return to normal. Comet told me after the flight that before we go into tension, he puts himself in proper position just to get a frame of reference should he need it. This time he did. I always review my IROK procedures and what they mean. From now on, I'll do both. ◀

Lt. Strobel is a RIO with VF-11.

The Discovery crew caught the whole spectacular thing on high-resolution film.



Pay Attention, Stupid

By LCdr. Herb Arnold



If you are a "naval radiator" or "naval fright officer," chances are good that you've been tanked. Has the basket ever hit anything but your probe? Anything? Are you sure? Some tanking dramas result in bringing back the shuttlecock and hanging it in the ready room. The accompanying photos show the results of a slight, glancing blow from a KC-135's basket, which collapsed the radome five minutes after we hit it.

Here's my true-life confession: the refueling seemed normal to me. After topping off, we descended and increased speed to enter a low-level. We heard a loud "pop" from the nose area, and we could see a small piece of fiberglass flapping in the breeze. Guessing we might have had a birdstrike, we declared an emergency, reduced speed, slow-flighted the airplane, kept an eye on the engine tapes, and headed to the closest divert. On rollout, the shadow of our nose on the ground was quite a bit different than what we were used to seeing.

Neither the pilot nor I remembered the basket hitting the nose. It had been a relatively normal joust with the Stratotanker. Not the smoothest plug I'd ever seen, but certainly not the worst. The smoking gun was the black skid mark on the radome.

Fortunately, the descent also kept any debris from getting sucked down the intakes. No FOD, no foul.

Before this episode, the last item on my before-tanking checklist was, "Let the games begin." Now it reads, "Pay attention, stupid." ◀

LCdr. Arnold flies with VAQ-131.

—FOD IN THE COCKPIT— Stealth Battery

By Lt. Adrian Marengo-Rowe

I had been eagerly anticipating our air wing's detachment to NAS Fallon. I planned to take advantage of everything Fallon had to offer: great flying, great weather, and of course, the opportunity to increase my earnings at the local entertainment facilities! Unfortunately, a single AA battery spoiled everything.

As the wing RIO on a close-air support hop, I decided to bring along our squadron's new handheld GPS. When our brief was over, I entered the coordinates for all the mission points. Since timing and positioning are critical for success during a CAS mission, I knew the handheld GPS would be a great backup for the F-14's temperamental INS.

The first two runs went like clockwork. Navigation and timing were on and on. Setting up for the third run, both the GPS and the INS indicated we were 10 miles north of where we were supposed to be holding. I recommended the lead aircraft bring us back south, and he responded by passing the lead to us because his INS was a victim of "runaway winds."

"No problem," I thought, as we flew back to our assigned location and completed another uneventful run on the target.

During our egress from the target area, I noticed the battery-power-low light on the GPS screen. Fortunately, I had brought along a fresh set of batteries. I slid the battery pack out and popped in four new AA batteries.

I thought, "All right, I'm back in business!" Well almost... Only three of the dead batteries made it into my nav bag. The fourth slipped between my fingers, bounced off my left leg, and rolled under the ejection seat.

"Oh well, no time to worry about it. Now, if it doesn't float back up during the rest of the flight, I will just reach under the seat and grab it after we shut down."

We continued the hop, which included one more CAS run, followed by multiple reattacks on the target, dropping Mk-76s and strafing.

I was so confident that I would recover the battery that I never mentioned it to my pilot. When I called back to the base, I told them the jet was "up and up."

After landing, I pinned my seat and then went headfirst into the rear cockpit to locate the missing battery. To my dismay, I couldn't. I decided it was time to

'fess up and let the experts find it. I wrote up a "FOD in the cockpit" gripe and dashed off to the debrief, followed by a strike-planning meeting.

A couple of hours later, I received a message to call the MO. "They can't find the battery," he told me. "Are you sure you dropped it?"

I had already checked my nav bag and flight gear. I had started with eight batteries, and now I had seven. I clearly remembered watching the battery hit the floor of the rear cockpit.

"Yes, I'm certain I lost it in the cockpit," I replied.

Maintenance decided to pull the jet into the hangar; the canopy came off, the ejection seats came out, and so did the avionics. Literally everything came out of the jet except the AA battery.

Aside from the obvious safety hazard of a battery floating around the cockpit during flight, there was also concern over the future damage that would result if and when the battery corroded.

For five days, the jet sat in the hangar while everyone from CAG down spent time searching for the missing battery. Literally hundreds of man-hours were expended as a result of my carelessness. We lost an aircraft during intense flight ops. There is never a good time for an incident like this, but somehow, I'd managed to pick the worst possible time to cause a jet to go down.

Why? But? Maybe? If? The hindsight revelations seemed endless. With better preflight preparation, did I need a GPS? Why didn't I change the batteries before I went flying? I definitely should have told the pilot so we could terminate the mission and bring the jet back in one-G flight. Doing that alone would have isolated the battery to the rear cockpit and eliminated the need to pull everything out of the front cockpit.

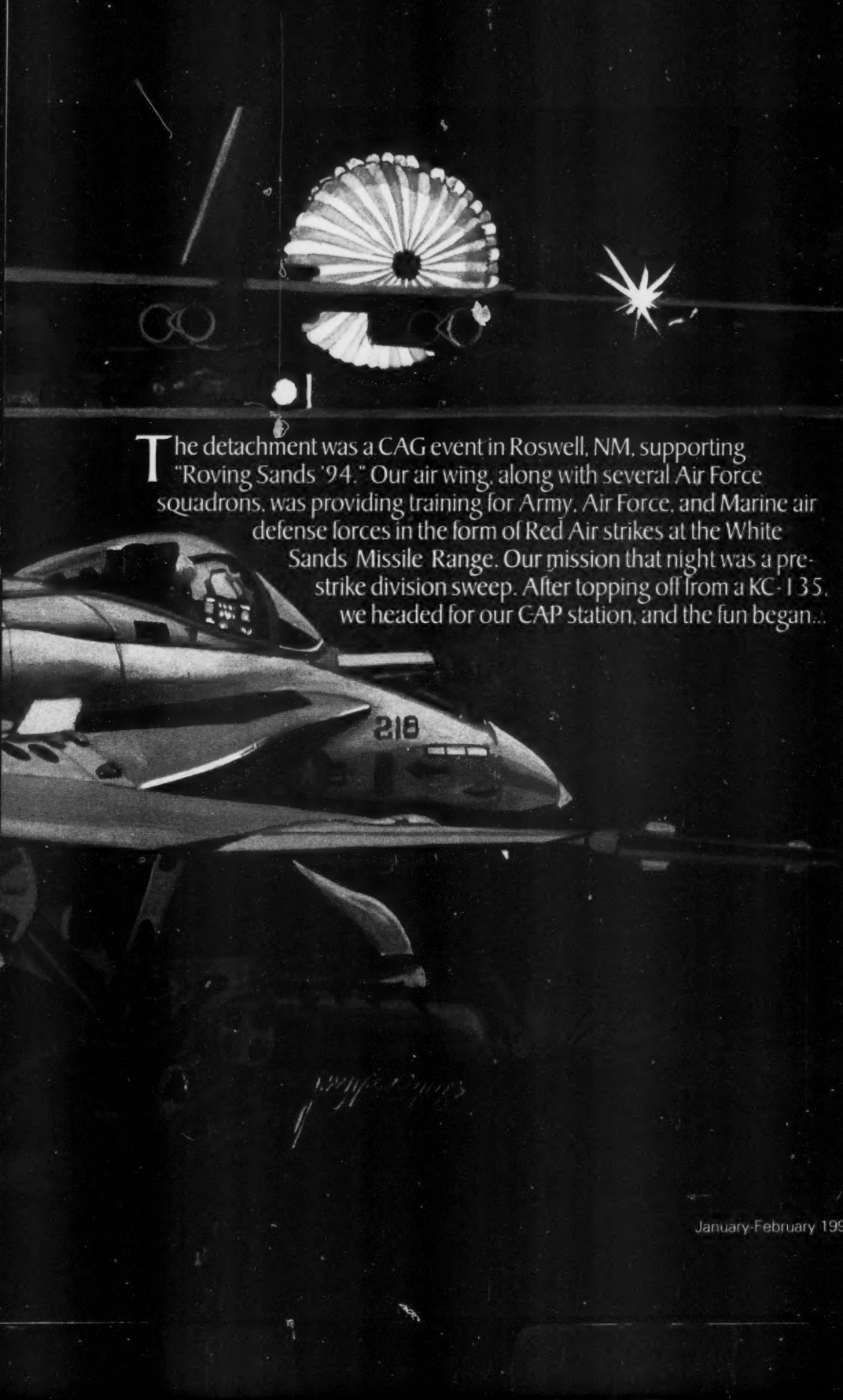
After the most exhaustive search anyone could recollect, the cockpit was reassembled and to date the battery has still not been found. I re-learned a couple of basic principles involving lost sorties, the maintenance department's efforts, and least important, my pride. As with most others stories like this, the incident began with my preflight preparation, and like most of cockpit FOD incidents, it was completely preventable. ◀

Lt. Marengo-Rowe is a RIO with VF-201.

That *Sinking* Feeling

By Lt. Chris Zimmerman





The detachment was a CAG event in Roswell, NM, supporting "Roving Sands '94." Our air wing, along with several Air Force squadrons, was providing training for Army, Air Force, and Marine air defense forces in the form of Red Air strikes at the White Sands Missile Range. Our mission that night was a pre-strike division sweep. After topping off from a KC-135, we headed for our CAP station, and the fun began...

As Dash 3, I was trying to maintain sight of the lead, keep track of my wingman (who just happened to be the new skipper), and shoot the F-16s and F-15s that were coming out after us. Three members of the flight were wearing NVGs, and the weather was great. I was glad that the hop was almost over when the bingo bug sounded, indicating it was time to head back.

We left the area in sections and received word to recover on runway 21. Just as we hit the initial, Tower asked if we could go to runway 17 because a B-52 was on a straight-in final for 21. I accepted and swung out to the north to set up for 17. Rolling out to the end, I taxied onto the "hammerhead" and saw a B-52 blocking taxiway B as he tried to release a drag chute. This was the only route back to the line, so Ground cleared me to taxi up runway 3/21 if I could "hurry" because there was another B-52 on final.

With only the light from my extended probe to guide me and with a sense of urgency, I started across the "hammerhead" toward the runway. I was focusing on the B-52's very distracting bright lights when suddenly the taxiway felt unusually bumpy. After jumping on the brakes, I realized that I was in the weeds.

"Skipper, I'm off the taxiway, don't follow me. I'm shutting down." Why did it have to be *him*? I sat in silence, waiting for a tow, as the rest of the air wing recovered. The skipper kept his taxi light on me until the trucks showed up to pull the jet free. After about 45 minutes, the tractor arrived

and easily yanked me out. My jet had barely settled into the hard dirt.

The big question on my mind was FOD. A thorough inspection back at the line eased my fear. Only a little dust on the brakes, and otherwise the jet was fine.

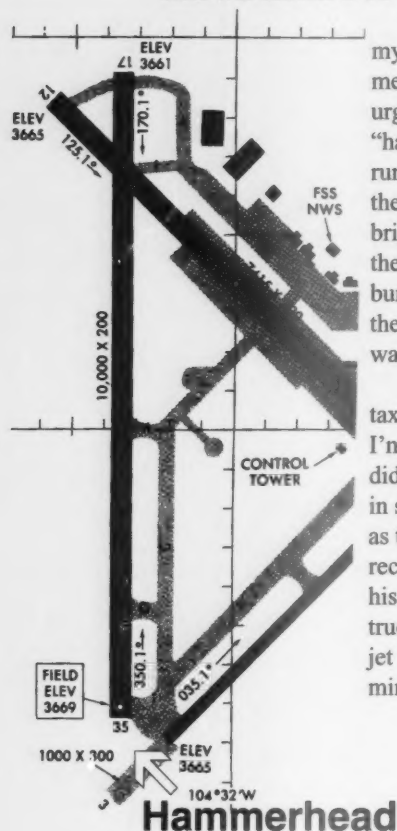
Three things stood out as I analyzed the events that night. The old saying that "the hop isn't over until the paperwork is done" took on new meaning. After the challenge of a division sweep on goggles with questionable weather, I had definitely relaxed my concentration for the recovery. A large air wing recovery, with heavies like the B-52, is just as intense as the tactical portion of the hop. Throw in a sudden change of runway at an unfamiliar field and it becomes even more challenging.

Secondly, I let the ground controllers rush me into something that I obviously wasn't ready to handle. Phrases like "If you can hurry" should make you stop and analyze the situation.

Finally, I should have had my taxilight on. My probe was extended and provided some light, but with my attention focused on the B-52, it wasn't enough to keep me on the taxiway. I have always been taught to use the taxi light sparingly to avoid blinding other aircraft. Using the probe light in the Hornet is a fairly common practice because it isn't nearly as bright as the taxi light. This may work at your home field, but it doesn't hold up at an unfamiliar location. Even back at home, the taxilight could save you from running into any number of things that may be waiting out on the taxiway or runway. A good analogy to taxiing with the probe light would be driving down a dark country road with only your parking lights on. Probably something you wouldn't ever do, so why do it in an F/A-18?

I found out later that several of the taxiway lights where I ran off were missing. My taxi light would have been an even bigger help at this field, which wasn't up to the maintenance standards of military bases. ◀

Lt. Zimmerman flies with VFA-146.



New Consolidated Parachuting Procedures

By Claudia Lee

A recent AV-8B midair highlighted the need to update parachuting procedures. Both pilots ejected and their aircraft crashed into the ground. One pilot improvised and dropped his seat pan before the parachute landing fall (PLF). He received only minor injuries. The second pilot retained his seat pan and suffered major injuries.

The aviation mishap board (AMB) recommended a NATOPS change giving the option of jettisoning the seat pan, which will reduce the parachute descent rate and injury. The model manager at the Naval Aviation Physiology Training Program (NAPTP) accepted this tasking.

An analysis of 407 overland ejections and bailouts of Navy and Marine Corps mishaps from January 1977 to June 1991 shows 140 parachute landing injuries—34.3 percent of the people were hurt during parachute landing. Data provided by the Naval Parachute Test Range, China Lake, indicates that jettisoning the seat pan (over land only) will help prevent leg injuries and reduce the descent rate, which might be critical if the parachute malfunctions, or when you are over rocky terrain.

Besides PLF injuries, the old procedures, which did not mention jettisoning the seat pan, could injure or kill an aviator who was drifting from land to water or water to land. You could drown using overland procedures for a water landing. Similarly, using overwater procedures when you are near powerlines or trees could cause electrocution or trauma.



Now, there is only one set of IROK procedures to remember. It includes the option of releasing the seat kit to avoid being injured during the landing fall, or getting entangled in powerlines or trees.

"Depending on the situation when the pilot ejects, he can decide if he should jettison his seat-pan," HMC(PJ) James Catrett said. He is the LCPO for the NAPTP model manager's department at NAMI. "If he does decide to release it, he needs to consider if he will be able to locate and retrieve his survival items." (*Being able to locate and turn off the emergency radio beacon may enhance ground-air communications.—Ed.*)


In the near future, the physiology and water-survival training will include hands-on drills to emphasize the best options for a given situation.

The new **IROK** procedures for all aircraft are:

- I** -Inflate LPU
- R** -Release raft
- O** -Options:
 - activate steering system
 - raise visor
 - loosen or discard mask
 - snaph lobes
 - stow gloves
 - jettison seat kit
- K** -Koch connector-release

The new procedures are being incorporated into the appropriate NATOPS manuals and training curricula developed by the NAPTP/NAWSTP model manager. For training on IROK procedures, contact your local aviation physiology training unit (APTU). ◀

Ms. Lee has been a technical writer on the Model Manager's staff for 11 years. She writes and revises emergency egress procedures in NATOPS manuals.



Warp One, Mr. Sulu!

By Lt. Chris Rollins

Two senior experienced Cat I aviators to fly a day low-level in good weather. What could possibly go wrong? Especially since we were familiar with the route as well as each other.

My BN and I each had a full set of work-ups and a cruise under our belts. We enjoyed flying together and were looking forward to this great hop. We were scheduled to fly an IR route as the first part of our day-night terrain-clearance qual. My BN had recently flown in the airplane we were assigned and knew its history of system problems. We briefed that if we had trouble, we would fly the route visually.

On engine run-up, the INS developed a glitch. The weather was good, however, and we pressed on. By the time we reached our entry point, the INS was useless. Our IR route would just be a visual route, no big deal for salty guys like us.

The first point on the route was a TACAN that we crossed at high altitude. The next two points were in the descent and over open ocean. As we approached the third point, we turned and headed east. I started thinking aloud that the geography didn't look quite right. My BN agreed but said that he had the bridge that he normally used as a checkpoint on radar. We turned to the next heading and continued.

As we headed toward the next point (a city), we immediately crossed a large ridge.

"Funny, I don't remember that being there," I thought to myself. The road that led to the next point never appeared and neither did the city. We turned on time and pressed on, thinking that we couldn't be far off course.

After crossing another mystery ridge, I saw a rather large river that wasn't supposed to be there. I checked my chart. The terrain I saw wasn't even on my chart! I suddenly realized that this river had to be the Columbia River, which was, shall we say, well south of course. I told my BN, and he replied, "No, it can't be!" He quickly analyzed the chart and picked out a much smaller river much closer to course line saying, "It's got to be this river." I hoped he was correct. We flew on for only a few more seconds, and I made out a large bridge, a city and enough geography to realize that it couldn't possibly be the river we hoped it was.

I said, much more emphatically, "That's the Columbia River!" This time he agreed, and we started a turn north. We were now totally confused. As we rolled out of our turn, my BN discovered that our MA-1 compass had slewed itself off by 40 degrees. He reset it to the proper heading, and we began an intense study of the terrain to determine where we were. We again found course line and tried to continue, very thankful that no one from Center was trying to call us.

In just a short time, we were again "confused as to where we were". Once more, the terrain wasn't matching our charts. This time, we immediately suspected the MA-1. Sure enough, this wayward instrument was continuously drifting. My BN approximated our position by looking at the large mountains around us. We were still within the route structure, and we were even able to determine an approximate direction to the next point. However, I didn't want to tempt the FAA gods a second time. We elected to exit the route, tell Center that we had lost our INS, and didn't have a gyro compass. They located us on radar and gave us a wet-compass vector.

As we climbed, we quickly picked out the coastline, some familiar mountains and cities, and other landmarks of the great Pacific Northwest, and eventually made it home.

We were fooled by the good weather and our experience. Somewhere, after the first point of this route, our compass drifted badly. The bridge my BN thought was his usual checkpoint turned out to be several miles south of the actual point. A descent checklist would have pointed out our compass problem, and maybe we could have compensated for it. As it turned out, we blew off the basics and entered our route well south and went farther south.

Things only got worse. We were lucky the FAA didn't try to give us a violation. After all, on an IR route, they don't like it very much if we "boldly go where no man has gone before." ◀

Lt. Rollins flies with VA-52.

I started thinking aloud that the geography didn't look quite right...

Bravo Zulu

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander, or MAG commander. In the case of helo dets, the CO of the ship will suffice. A 5-by-7-inch photo of the crew by a squadron aircraft should also accompany the BZ nomination. Please include a squadron telephone number so that we can call with questions.



Left to right: AW1 Chris Olivo, Lt. William Stewart, AWAN Sammy Cascio, Lt. David Persky

Lt. William Stewart
Lt. David Persky
AW1 Chris Olivo
AWAN Sammy Cascio
HS-8

HS-8's Det 1 was part of CQs onboard USS *Abraham Lincoln*. Loosefoot 610's crew had just finished their preflight checks before an evening launch

when the man-overboard call sounded. They launched, and within five minutes, had found the survivors. AWAN Cascio (swimmer), who was on his second flight in the squadron, pulled the survivors from the chilly waters. The entire SAR operation took only 20 minutes from the first call of the 1-MC.



Left to right: AW2 Blaine H. McCauley III, AW3 Heather D. Lingo, Ltjg. Scott D. Isaacson, LCdr. Robert Stephens

LCdr. Robert Stephens
Ltjg. Scott D. Isaacson
AW2 Blaine H. McCauley III
AW3 Heather D. Lingo
HS-1

The crew of Seahorse 403 was on a training flight 20 miles east of Mayport. During an approach to a sonar hover with the coupler engaged, the No. 1 engine failed without warning. LCdr. Stephens immediately applied full power, while Ltjg. Isaacson (PAC) disengaged the coupler, lowered the collective to build Nr, and leveled the nose to build airspeed.

LCdr. Stephens took control, called "Mayday", and told the crew to prepare to ditch. The SH-3H continued settling to about 15 feet AGL. At this point, LCdr.

Stephens told Ltjg. Isaacson to jettison the sonar dome. With AW2 McCauley's recommendation, the crew also jettisoned the MAD reeling machine.

AW2 McCauley and AW3 Lingo checked the aircraft and reported no other problems. LCdr. Stephens stabilized the aircraft at 35-45 knots and started a slow climb. Ltjg. Isaacson backed him up with altitude and ground-speed reports.

The crew completed the checklist for engine shutdown, dumped fuel in preparation for landing, and made an engine-topping check.

LCdr. Stephens declared an emergency and flew a single-engine running landing to Mayport.

A catastrophic failure of the bearings in the front frame, resulting in the loss of the radial-drive shaft, was responsible for the engine failure.



Left to right: Capt. Patterson, Capt. McGee

**Capt. Russ McGee, USMC
Capt. Pat Patterson, USMC
HMT-303**

During a training deployment to MCAS Yuma, Capt. McGee (IP) demonstrated a simulated single-engine approach to Capt. Patterson (RAC). Capt. McGee reduced the No. 1 engine to flight idle and rolled onto final.

At approximately 20 feet, the crew heard the low-rpm warning. They cross-checked their instruments and saw that the rpm was falling through 90 percent and that both gas generators were at flight idle.

Realizing that there wasn't enough altitude to recover with the other throttle, Capt. McGee made a full-autorotative landing. He and Capt. Patterson cross-checked their instruments again and confirmed that, although the throttle on the No. 2 engine was full open, the engine had reduced itself to flight idle.

Capt. McGee secured the No. 2 engine to prevent an over-temp.

Postflight revealed that a first-stage turbine blade in the No. 2 engine had failed.



Left to right: Lt. Jim Nolan, LCdr. Phil Angelini

**LCdr. Phil Angelini
Lt. Jim Nolan
VF-14**

Fifteen minutes into a division low-level at 480 KIAS and 500 feet AGL, Lt. Nolan (pilot) noticed a slow-roll response to the left and the need to increase left stick to keep straight and level. Lt. Nolan and LCdr. Angelini (RIO) looked at the Tomcat's wings and saw that the port wing was at 20 degrees, while the starboard wing was at 68 degrees. They immediately terminated the low-level and began a decelerating climb.

After reviewing NATOPS and checking controllability in the landing configuration, the crew decided to divert to MCAS Yuma for a long-field arrestment. Winds were 270 at 15, gusting to 25 knots.

Lt. Nolan flew a 14-unit straight-in approach at 192 knots to Yuma's runway 21, which was 13,300 feet long. The aircraft landed on centerline, but the hook skipped the long-field gear. The F-14 stopped 400 feet from the end of the runway.

A postflight inspection revealed a sheared cross-over shaft, which prevented the crew from correcting the asymmetric wingsweep.



Left to right: Lt. Eric D. Stechmann, 1stLt. Marlin C. Benton

**Lt. Eric D. Stechmann
1stLt. Marlin C. Benton, USMC
VT-21**

Lt. Stechmann (IP) and 1stLt. Benton (SNA) were inbound to the break after an OCF training sortie when their T-45 ingested a large bird through the port intake. As the engine started to vibrate loudly, indicating an impending failure, Lt. Stechmann and 1stLt. Benton started precautionary approach procedures. At the time, they were at 800 feet AGL, 280 knots, and 1.5 nm from the approach end of runway 13L at NAS Kingsville.

They intercepted a straight-in PA profile, extending the gear at 230 knots, and 1,000 feet before the end of the runway.

After landing, the two pilots shut down with approximately 2,000 feet remaining. They had enough momentum to taxi clear of the runway. A short-field arrestment had not been possible, and they hadn't needed to use the long-field gear.

Inspection showed substantial damage to the first- and second-stage compressor blades.



My Convertible Skyhawk

By Lt. Dan Brown

AS a student, I lived with checklists. Checklists, checklists, checklists! They were drilled into my head...apparently not deep enough, though.

My A-4 squadron was on a weapons det. One of those too-rare times in the training command when student pilots get to fly solo. On this hop, I was going to soon wish I had another set of eyes in the cockpit.

I was supposed to be Dash 3 of a four-plane, but fortunately for everyone, Dash 4 went down in the chocks, leaving me as tail-end Charlie. The brief included "showtime" canopy closing at the hold-short. On lead's signal, all three canopies came down together. I watched them. It was perfect. Then I noticed Dash 2 looking at me. Oh, yeah, the signal. Let me see, the canopy was down, canopy warning light out. I gave him a thumbs up, and we were ready to go.

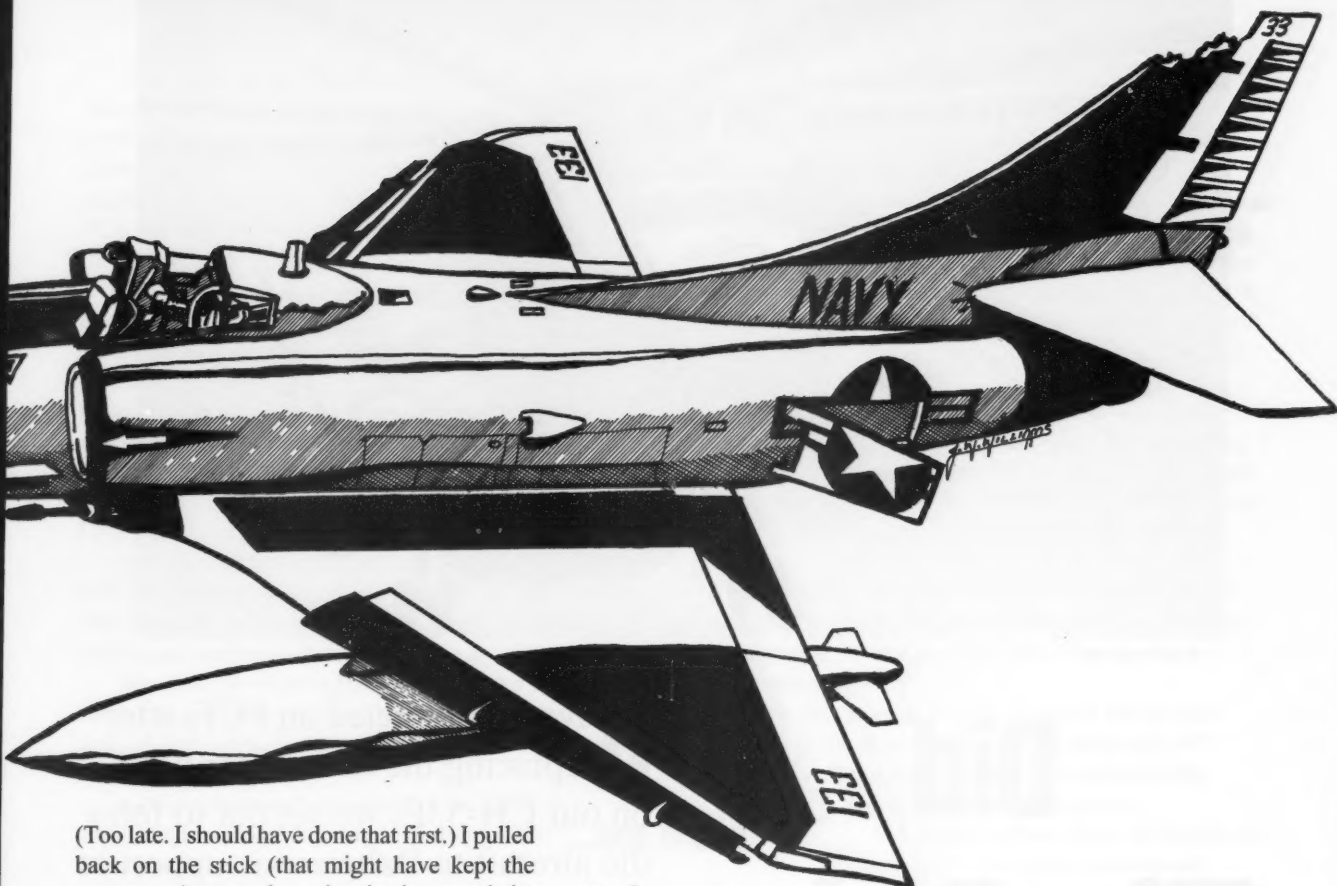
I ran the engine up and heard the distinctive tone of the radalt. (In the A-4, the LAWS tone is the same as the canopy warning tone, which is actuated when the canopy isn't locked, and the engine is above a certain

percent.) I watched lead roll, and took the runway. Ten seconds after Dash 2 rolled, I started my roll. I don't remember hearing the warning tone during the takeoff roll.

The takeoff was fine. I had lead and Dash 2 in sight, so I was trying to get some knots on the jet to catch them. Suddenly, the cockpit got very loud. It sounded like air rushing, and my first thought was to check the cabin altimeter. Of course, since I was only at about 2,000 feet, it was still reading ambient pressure.

I checked all the cockpit warning lights, and none were lit. Then, I noticed that the canopy bow was separated from the windscreen by about an inch. I quickly looked down at the canopy-locking rifle bolt—for the first time since I had climbed in. It was still open. I reached for the closing handle, but it was too late.

My canopy couldn't resist the aerodynamic jettison forces that NATOPS talks about. It had managed to hang on until about 20 or 30 knots above NATOPS airspeed. Enough was finally enough. I pulled power.



(Too late. I should have done that first.) I pulled back on the stick (that might have kept the canopy on), started turning back toward the field, and made a rather frantic call to lead.

Lead's calm voice brought my pulse down into the 3-digit range. He asked me if the plane was still flying OK, and I realized that it was. (The canopy had taken off a small section of the vertical stabilizer, which didn't affect controllability.) I still had a windscreen, so as I slowed down and lowered my seat a little, I could hear the radio.

As I set up for a straight-in approach, about four different people asked me if I had my hook down for the arrested landing. Someone evidently thought I didn't know how to complete the checklist. The hook was down, and after bagging a little "open cockpit" time, I touched down for an uneventful arrestment.

Checklists are essential tools for aviators. But like any tool, the way we use them is just as important. Too often, a step, which is actually a sequence of steps, is abbreviated into a one- or two-word mnemonic. In my

case, I was "holding canopy till the hold-short." But this step was not all I needed to check. I checked "canopy down, light out," but that wasn't enough. NATOPS reads, "canopy...check down, rifle bolt locked, four lugs showing, canopy light out, no canopy warning tone."

I learned two big lessons. The first was to never abbreviate a checklist step for ease of memory. The second was if you hold an item out of a checklist, do the checklist over from step 1. Any time that you interrupt a checklist, start over.

Inspection of the aircraft after this incident showed a bad microswitch in the rifle-bolt mechanism, which led to the warning light failure, and possibly, to the failure of the warning tone. ◀

Lt. Brown flew with VA-155. He is currently assigned to VA-115.



Lt. M.R. Christopherson

Did The Duke Do It Like This?

By Lt. Andrew J. Geisler

Having completed an FCF, after replacing the main rotor head on our CH-53E, we set out to ferry the aircraft to Bahrain in support of our COMUSNAVCENT two-plane detachment in the Arabian Gulf. This particular helicopter had been down for nearly a month at our Scheduled Depot Level Maintenance (SDLM) site in Tel Aviv. We anticipated the usual problems that crop up when flying a helicopter after such a hiatus. These difficulties, surprisingly, were minimal and when they did arise we were able to use the parts and expertise from the SDLM site to make a quick FCF.

During this detachment, however, I discovered a few maintenance practices that disturbed me. One instance involved a first-class petty officer (the det LPO) who used a personal toolbox while on detachment. Furthermore, he kept the box on the aircraft while the aircrew flew the FCF. My immediate concern was how we accounted for these tools before takeoff.

He assured me that he accounted for every tool before each launch. However, my anxiety was not diminished as I considered the possibilities. The primary method of tool control is standardization, and I was not satisfied that anyone on the det could account for his personal tools. Also, pilots rely on the aircraft crew chief to obtain an "ATAF" (all tools accounted for) before each flight, and I was sure that our crew chief couldn't do that with our LPO's personal toolbox.

Uneasy with this situation, I asked the LPO to consider the tool box as part of his personal baggage and to stop using any of the tools on the aircraft. With that settled, we continued on to Alexandria and then Hurgada.

We spent the night in Hurgada, and the pilots told the aircrew to get plenty of rest. The following morning, I realized that maybe we should have told the same thing to the maintenance folks.

As the detachment mustered in the hotel lobby at zero dark, I discovered that many of the maintainers had pursued diplomatic relations with some of the tourists staying at the hotel, resulting in an overtired maintenance crew. We had failed to remind the maintenance crew of the squadron's eight-hour bottle-to-wrench rule. Meanwhile, we were staring at a 14-hour day as we prepared to cross the Saudi Arabian Desert en route to our final destination.

Before starting the engine and engaging the rotor head, I surveyed the det to make sure they had enough water to survive the desert crossing. Waving a bottle of water each, they assured me that they were ready for anything. I should have known better. I inexplicably thought otherwise, and we proceeded to get underway.

Our first stop was Al Wahj, Saudi Arabia, where we refueled in preparation for the three-hour leg to Gassim. Following an uneventful flight to Gassim, we prepared for what we thought would be the final leg of a very long trip. Unfortunately, it didn't turn out that way; we had a main-gear-box chip light 60 miles north of Riyadh. The chip light would not extinguish as

we prepared for a precautionary landing in the heart of the Saudi Desert.

After landing into the wind on the desert floor, our disregard for normal safety practices continued as a cavalier plane captain worked within the rotor arc without adequate ear protection. After shutdown, the HAC took the det chief aside and told him that the det must follow proper maintenance practices, procedures and squadron SOPs. Fortunately, no one was injured, but we were still stranded in the baking Saudi Desert as the sun hovered low in the western sky.

As we began removing the chip detectors to inspect for chips and shavings, the water supply began running low. Although we had established communications with an AWACS aircraft, we might have to spend at least one night on our own with two bottles of water for nine people.

Fortunately, the chips were not big. We started up, completed a ground turn, and diverted to Riyadh, where we stayed for several days because of an unrelated maintenance problem.

Upon shutdown at Riyadh, I noticed that several members of the detachment were showing signs of dehydration, which were undoubtedly exacerbated by the lack of rest.

We usually address these difficulties by issuing SOPs or creating maintenance instructions (MIs). The modern solution is to codify common sense, but I felt that it was something more basic than that; I should examine my own leadership traits and how I employed them.

For instance, I assumed that the LPO—a veteran squadron member—knew our tool-control policies and that if he was doing something, it must be right. This misconception is common throughout naval aviation, and it usually comes from laziness.

By not pushing myself to learn all I could about maintenance, I had delegated the most basic responsibility of knowledge to other squadron members.

Regarding rest and water, I violated a basic premise of leadership—to take care of my troops. Often, they may not be aware of what is ahead, and they rely on their leaders to inform and direct them. I also failed to plan for the worst. It was my responsibility to anticipate all out-comes and prepare myself to handle these possibilities. ◀

Lt. Geisler flew with CH-53Es with HC-4. He is currently assigned to the Naval Recruiting District, Portland, Oregon.

**...we were
still stranded
in the baking
Saudi Desert
as the sun
hovered low
in the west-
ern sky.**

Fresh As

AT-34 preflight basically consisted of spinning the prop a couple of times, and checking the oil level and battery. Learning how to fly took precedence over knowing the aircraft's nomenclature.

Soon after reporting to the E-2C FRS, I learned that I had to demonstrate a much more thorough preflight. The first walk-around took an hour. The instructor pointed out specific items to look for, rattled off names of things, cited pressure limits, and told stories about "this isn't written in NATOPS, but I always check it because one dark night out on the boat..." His overwhelming knowledge impressed me, and I wondered how I'd remember it all.

Our first aircraft and their systems are simple, but at the FRS, we learn to fly a complex fleet aircraft and employ its weapons systems. We also learn (perhaps for the first time) how to do a thorough preflight. The instructors stress thorough preflights and NATOPS, while injecting personal experiences. Later in our careers, too many of us seem to forget those lessons.

When I reported to my first VAW squadron, I felt somewhat clueless, especially after falling for a few of the "new guy setups." However, I soon realized that as a fresh FRS

graduate, my NATOPS knowledge, especially preflight, was superior to many of the cruise-experienced Desert Shield veterans with thousands of flight hours. I vowed not to let my NATOPS proficiency drop off.

Now, having nearly completed my first sea tour, I find myself fortunate to have experienced only one major emergency. Is this purely luck? Perhaps. But I can remember plenty of times when one of the aircrew or I caught something on the preflight that could have been catastrophic. I am always amazed when the guy I'm flying with walks 20 minutes after me but is in the cockpit five minutes before me. How thorough could his preflight have been?

Operating fleet aircraft involves assuming awesome responsibility when you sign the A-Sheet of a \$40-million aircraft. Knowing the jet's nomenclature, all of its systems and how they interrelate shouldn't be the mark of only the bright-eyed nugget; it should be the norm for all aircrew. Each of us should take a close look at how we do business.

Every CO and safety officer I know stands up during safety stand-downs and preaches, "You should be getting yourself in the flying mindset at least an hour prior to the brief. You



the FRS

By Lt. Gary Gates

should put all the paperwork aside and concentrate on matters at hand." Easy to say and perhaps even easy to do for the nugget jaygee with no major ground-job responsibilities. But what about the MO or Ops-O? What are you supposed to do when the XO asks you about the status of item "X" as you're walking to Maintenance Control to read the ADB?

Walking to the jet 15 minutes late still thinking about the paperwork jungle on your desk isn't the right way to do business. Neither is doing the quick check of the intakes and exhausts so as not to delay the start.

When was the last time you picked up a NATOPS and read the preflight section? Do you check everything NATOPS says to check? Does the majority of the aircrew know what the NATOPS warnings, cautions, and notes are regarding specific preflight items? How many aircrew in your squadron know which antenna goes to which radio? What if one has a significant bite out of it? Do you know which radio could be affected?

How many times have you tailored your walk-around to fit the person you're flying with?

"Damn, I'm flying with John Doe. Guess I better take a real good look at the plane

tonight," or, "Cool, I'm flying with Joe Smith. He knows his stuff better than anyone in the squadron. Won't have to walk as early today." Or even worse, "The walk-around's no big deal. I can handle anything that might come up in flight."

What's the definition of your "business as usual" preflight? If it means scampering to Maintenance Control with enough time to read just the pink gripes, or hustling to the flight deck 20 minutes late, then perhaps you've become one of those links in the long chain of events leading to a mishap or near-mishap.

With all the deadlines we're forced to meet, with all the trees we kill, with all the pressures for efficient time management, something has to fall out of our scan. NATOPS seems to be the first thing to go. The only time we really get back into it is a month or so before a stan check (and for some aircrew, not even then).

With all the external things that you can't control trying to kill you, you'd think every aircrew member would do everything in his power to control those internal things that should have become habit by now. ◀

Lt. Gates flies with VAW-113.

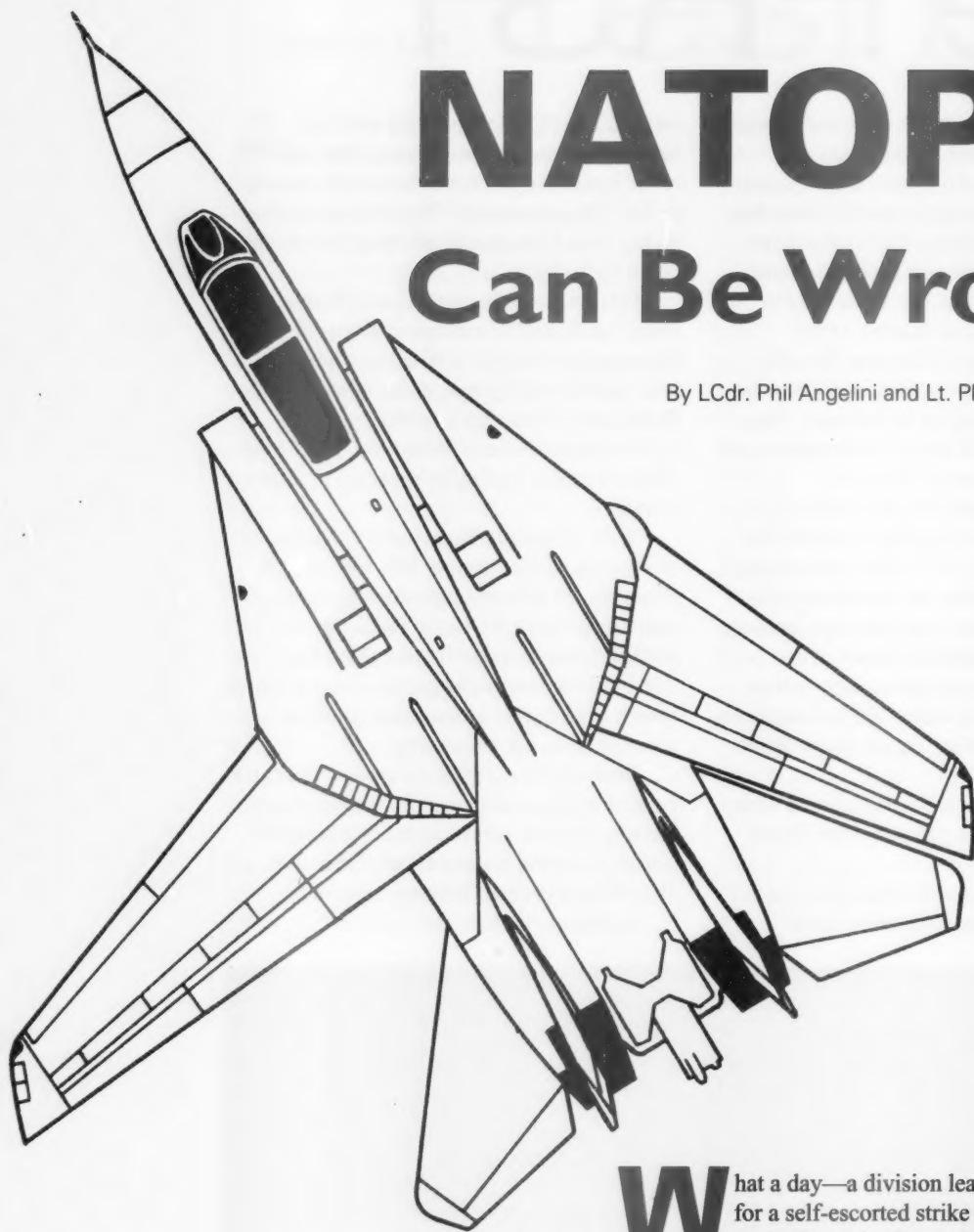


R.E. Kling

NATOPS

Can Be Wrong

By LCdr. Phil Angelini and Lt. Phil Nolan



What a day—a division lead in Camelot 102 for a self-escorted strike mission! Power projection at its finest. About three minutes into the low-level portion of the flight, while trying to make a quick heading change, we noticed a controllability problem: the jet was hesitant to roll left and wanted to roll rapidly right. The roll rate to the left felt like a high AOA roll rate—sluggish and slower than normal.

The wingsweep gauge showed 45 degrees, but after a quick look left and right, we saw that our Tomcat was in the X-wing configuration. The left wing was at 25 degrees, and the right wing was at 45 degrees. The aircraft was at 400 feet AGL, 480 KIAS, in straight-and-level flight.

We called a knock-it-off, then climbed and decelerated. The right wing continued to move aft at a slower-than-normal rate during our climb, and the left wing and wingsweep handle went to 20 degrees as we decelerated to 250 knots. The right wing finally stopped at 68 degrees about 10 seconds after we realized we had the emergency. We continued climbing to 10,000 feet AGL and put MCAS Yuma on the nose.

We trimmed lateral stick full opposite the forward wing to give maximum spoiler deflection. We pulled out the PCL and started reading the NATOPS procedures. Because of the lengthy and involved seven-page emergency, we read through the procedures thoroughly and slowly so as not to miss a thing. We were thankful we had plenty of time and gas. At this point, we knew we had to follow the procedures for asymmetric wingsweep and do a controllability check. We had to read 12 conditional statements, two warnings, six cautions, and nine notes as well as numerous procedural steps.

One of the first PCL procedural steps was to pull the circuit breaker for aux flap control. We didn't know that this procedural step prevented us from matching the wings for a more controllable landing.

Before checking controllability, we knew we had an F-14 with a full asymmetry (left wing forward), spoilers operational, and a wingsweep handle stuck at 20 degrees. (Lt. Nolan had just given a lecture on F-14 asymmetric wingsweep and was the squadron expert on the subject.) Hence, we knew that we had to trim away from the forward wing for full spoiler authority. This is a critical step because if you trim into the forward wing to trim out the stick forces, you will decrease the spoiler deflection available. Although the PCL does say that stick forces can be trimmed out in a "cruise" configuration, we kept the trim full opposite because we didn't know what to expect for flight characteristics and wanted maximum controllability at all times. The disadvantage to doing this was having to endure the extremely high stick forces.

During this emergency, our wingman coordinated our approach while we were complying with NATOPS. We checked controllability: 14 units AOA showed 192 KIAS with a centered yaw string. The chart predicts 180 KIAS.

We made small heading changes and power corrections. Controllability was fair, but the stick hit the left stop on one of the turns. We dumped our gas to 4,000 pounds

and started a 15-nm straight-in for runway 21R (which is 13,299 feet) at MCAS Yuma. We chose not to take a short-field arrestment for fear of exceeding the max-speed limitations of the E-28 arresting gear. The approach was flawless, considering the constant 20 pounds of left-lateral stick force required to hold wings level.

Although the F-14 PCL said that crosswind asymmetric landings had never been flight tested, it did say that winds from the aft wing side were optimum. We were very fortunate because as we started the approach, the winds were 60 degrees off our right wing at 20 knots, gusting to 30. We told Tower that we would be taking a long-field arrestment and requested info on the terrain past the overrun end of the runway.

Tower reported that flat desert lay beyond the 1,000-foot overrun. We discussed our options if we missed the long-field gear, and decided the best option would be to keep it on deck and stay with the jet if it ran off the runway.

We landed in the first 500 feet of runway, on centerline, at 192 KIAS. About 2,000 feet before the long-field gear, we dropped the hook. Approaching the long-field gear, we were at 140 KIAS, with 4,000 feet remaining.

We hook-skipped the long-field gear. Sticking to our game plan to keep the aircraft on deck, we started hard braking without the benefit of antiskid (which wasn't working). We had shut down the right engine.

The aircraft went off the runway into the overrun at about 60 knots ground speed, stopping 600 feet later. We immediately secured the left engine. Surprisingly, we had no structural damage, no FODed engines, and no blown tires, though the tires were shredded pretty badly. The culprit? An internally seized starboard wingsweep motor and a broken crossover shaft. Camelot 102 flew two days later.

As aircrew, we followed NATOPS procedures precisely, checked controllability, and landed the aircraft on the longest runway in the area, with extremely favorable winds.

However, the NATOPS PCL became an underlying cause of not allowing us to match the wings for an aft-wingsweep symmetrical landing. We learned that NATOPS can be wrong. Luckily, this is one change that wasn't written in blood. It is important to remember that though we could not match the wings because of the pulled aux flap circuit breaker, the rest of the F-14 asymmetric procedures in the PCL directly contributed to our successful recovery. ◀

LCdr. Angelini (RIO) and Lt. Nolan (pilot) fly with VF-14.

You Need to Be More Aggressive

By Lt. Michael King

A typical CAVU day in San Diego. In fact, not a carrier to be had for a thousand miles. What I did have was plenty of gas and lots of flight time to burn. With the systems wrung out and an island FAM complete, it was time for a little acro.

Passing 12,000 feet, we heard Beaver call one of their "timely" traffic advisories.

"Bird 700, traffic another S-3, 10 o'clock, 13,000 feet, west bound."

Half in jest, half serious, I said to my copilot, "Let's get 'em!" and pulled up into the traffic to pass him above and behind.

As luck would have it, my new playmate turned into me—then reversed as I crossed his six. Hook, line, and sinker, I thought he wanted to play.

Somewhere around the second reversal, my trusty COTAC piped up, "What are you doing? I don't think you should be doing this."

"Come on," I replied, "you need to be a little more aggressive. There we go. Fox two!" Much fun had by all. Well, almost.

With a clearly shook-up COTAC, I decided to go home.

To make a long story a little shorter, my playmate, as it turned out, wasn't playing at

all, but just trying to keep sight of me. He climbed out of his jet, and made a nice little snow-ball in the form of a complaint letter to his safety officer. Giving it a toss, he made it a whole lot bigger, and somewhere along the way, it hit me.

CAG, yes, CAG, was not impressed with me. A Human Factors Board and a month later, with very little tail left, I started working on my quals again, with completing ACT as the primary requirement.

Among the many ACT scenarios of the poor people who killed themselves was a sheet of paper labeled, "Five Hazardous Attitudes."

—**Anti-authority.** (Don't tell me.)

Regards rules, regulations and procedures as silly or unnecessary.

—**Impulsivity.** (Do something, do it quickly.) Does the first thing that comes to mind, doesn't select the best alternative.

—**Invulnerability.** (It won't happen to me.) More likely to take unnecessary risks.

—**Macho.** (I can do it.) Always trying to prove themselves. While this attitude is thought to be a male characteristic, women are equally susceptible.

—**Resignation.** (What's the use?) Never see themselves as making a great deal of difference in what happens around them. Leave actions to others for better or worse.

I could see a lot of myself lurking among the attitudes. I broke faith with the skipper and violated training and SOP. Worst of all, I broke all the crew-coordination rules, and put several of my squadromates in a potentially dangerous situation. It was definitely time to reevaluate how I did business. ◀

Lt. King is a pilot and an LSO with VS-33.

Hook,
line, and
sinker, I
thought
he
wanted
to play...

Chris Buhlmann

Things couldn't have been better. It was a beautiful Cascade Mountain day, a rarity for the Northwest at this time of the year. My pilot and I had just finished a satisfying terrain-clearance low-level into the target area with a bullseye, first run, first pass! After a few more runs to placate the training officer, we RTB'd via one of the more scenic VFR low-level routes. A check of the gas showed 6,500 pounds, plenty for the route since Whidbey was severe VFR.

As a new BN from the East Coast, I was truly enjoying this much talked-about, laid-back, Northwest flying when my pilot said, "We've got a low-fuel light."

We scanned the fuel gauge, which still showed 3,000 pounds. Knowing that the A-6 low-fuel caution light comes on between 1,360 and 1,660 pounds, I was annoyed that this "faulty" light was intruding on this lovely day's flight.

I checked circuit breakers, and my pilot climbed off the route to begin a bingo profile. We squawked emergency, talked to Center, and broke out the PCL. About then, the fuel quantity needle dropped from 3,000 pounds to 1,800 pounds, bounced a bit, then climbed back to 2,800 pounds. Now I was starting to think that perhaps this faulty light wasn't so faulty. My theory was confirmed a few minutes later when the needle went from 2,700 pounds to 1,200 pounds. It stayed there for 30 seconds before

going back to about 2,600 pounds. Could we really have only 1,200 pounds?

We pulled off our kneeboards, stowed loose gear, and cinched up our straps. We started talking about dual-engine flameout, single-engine landing, fast-flared approaches, when to go dirty, and anything else that crossed our minds during the painfully slow flight home. NATOPS warns, "A-6s have flamed out with 700 pounds indicated." That warning now occupied major portions of our brains. The needle showed 2,400 pounds—plenty for recovery—if the gauge was right. During the descent, Center finally handed us off to Approach with a hearty, "Good luck!" Approach reported, "Radar contact, 10,000 feet, 15 miles, heading 260, runway 13 in use. Vector 300 and stand by for dirty-up." Wrong answer.

We quickly replied that runway 25 would be fine, and that we would dirty up at pilot's discretion. We pushed over from three nm, 4,000 feet, dirtied up, and did a beautiful USAF-style flare with an uneventful rollout, taxi, and shutdown.

Postflight showed a bad fuel-quantity indicator plug and 800 pounds remaining. A close call? Yes. But a predictable ending, given our training and experience. We honored the light, and started emergency procedures immediately — no second guessing, no let's-press-it-is. ◀

LCdr. Shulock flew with VA-145. He is currently assigned to CINCLANTFLT.

**Center
finally
handed
us off to
Approach
with a
hearty,
"Good
luck!"**

Light? What Light?

By LCdr. James J. Shulock





By LCdr. D.T. Doyle

Limited Options

“Land as soon as possible” means to land at the first safe site. But there I was, contemplating launching from a single-spot ship in an aircraft for which I had just completed the NATOPS procedures for a land-as-soon-as-possible emergency.

We launched as a two-ship formation for our second attempt at finding our off-load ship. After dropping off our cargo, we headed home.

The return to base and reload took longer than expected, but both aircraft were eventually overhead the ship for another cargo drop. A third aircraft from the squadron had joined and was also orbiting overhead to

drop off a load of equipment and personnel. I was the first to land.

We had a full load of palletized cargo to unload and needed to refuel; we knew we had to hurry. My playmate's fuel was running low, and in fact, he reported only 10 minutes to splash just as I finished refueling. Anticipating a quick launch, I directed my copilot to start the takeoff checklist, signalled for chocks and chains to be removed, and then verified we were ready. On the final instrument and caution-panel check, things started to go from bad to worse.

Suddenly, the copilot directed my attention to the master caution panel where the CONTROL BOOST caution light was illuminated. I quickly scanned the instrument gauges and verified the No.2 hydraulic-boost pressure was at zero.

I immediately did the NATOPS emergency procedures to isolate the system and select the operable flight-control boost. Then, I told Tower about my problem. At this point, it appeared that my only option was to shut down, fold the rotor blades, and hangar the aircraft to clear the flight deck so that my playmate could land.

However, when I tried to start the auxiliary power unit (APU) for shutdown, it would not come up to self-generating speed. After several agonizing seconds at low rpm, it finally shut itself down. There was not enough hydraulic pressure to start the APU because of a leak that my crewmen could not locate. Without the APU, I could not position the rotor heads to fold the blades. There was no way my playmate, now reporting two minutes to splash, could land with my spread aircraft on deck.

At this point, my options were limited to launching with half a system and hoping for the best, shutting down and trying to remove rotor blades manually, or making the other aircraft ditch since it couldn't bingo to base. As strange as it seemed, the only reasonable alternative appeared to be to launch.

With time quickly running out for the other helo, we reviewed emergency procedures, checked hydraulic-system integrity as best we could, and prepared to launch. I was confident that the integrity of the No.1 flight boost was OK. I didn't have a reason to assume that it would not remain so despite the NATOPS warning. The loss of one control boost also meant that one of the two automatic flight-control stability systems didn't work. So, with a single flight-control boost, a single stability system, and a leak somewhere that was draining the utility system, we launched to orbit the ship while my playmate landed and refueled.

While airborne, we continued troubleshooting the problem but could not find the leak. The crew chief then noted that the direct-reading gauge for utility hydraulic pressure was indicating below precharge. My concern at this point was that a fire could start in the utility hydraulic pump because of overheating caused by the low system volume.

I had the crewmen strap into their seats, reviewed ditching procedures, and patiently orbited off the ship's starboard side. The third squadron aircraft orbited overhead as a SAR bird in case the worst happened.

It seemed like an eternity before the other aircraft was refueled and ready for launch. As soon as the deck was

...we launched to orbit the ship while my playmate landed and refueled.



PH1 Troy Summers

clear, I landed. With the second H-46 full of fuel and headed back to base for another load, the third aircraft binged. We now had time to investigate the problem, find the cause, and repair it.

Maintenance determined that so much fluid leaked out that the utility system couldn't operate the No.2 flight-boost system. The leak could not be seen since it was in the piping below the cabin deck. If the crew chief had seen such a large leak, and if he had reported that the pressure on the utility system's direct-reading gauge was below precharge before we launched, then my options would have been much more complicated and things might have ended differently. ◀

LCdr. Doyle flies with HC-6.

Slippery When Wet, or Galaxy Drivers Don't

By LCdr. Thomas A. Tack

It was Sunday afternoon. The weekend was great, and the time had come to return to Meridian from our cross-country to the nation's capital. My student and I had fully enjoyed our brief stay but were ready to bang out a few syllabus instrument flights.

As a SERGRAD T-2 instructor, I had plenty of chances for cross-countries and took them as often as possible. Rarely did a trip pass that I didn't learn something new. This one would be no different.

We would two-leg it home—as if we had a choice. The Buckeye was only good for about 500 miles. I'd never been to Campbell Army Airfield, so I decided to give it a try. The weather forecast was reasonable: some scattered layers and a chance of showers at our destination. We filed, briefed, and manned up.

My student flew an average hop. Some confusion with departure, average en-route procedures, and some difficulty keeping SA as we made a TACAN approach.

The weather-guessers were right on the money. There were showers near the field, some rather ominous. At one point, we deviated from the approach to avoid a cell. Eventually, we terminated the TACAN approach, spotted the field, and continued visually.

Approach passed us off to Tower, and we reported our position. Tower acknowledged, cleared us to land, and reported a wet runway.

"Say braking action," I asked.

"Braking action reported good by a C-5," Tower replied.

"A C-5," I thought. "What does that mean to me?"

I debated a trap for a few seconds but decided against it. My squatty little Guppy would have no problem on a wet runway. Besides, braking action was good and Campbell's runway was 12,000 feet long and 250 feet wide. Instead, I opted for a NATOPS-recommended wet-runway landing, which required raising the flaps on rollout and no aerobraking. Simple enough. I took the controls and completed the approach.

The aircraft touched down at approximately 105 KIAS. I raised the flaps and slowly applied the brakes. Almost immediately, I felt the skid, first to the right—I countered with rudder—then to the left. Back to the right, and again to the left. Each swing of the nose was more and more off runway centerline. I was exhausting all my defensive-driving techniques.

As the aircraft's nose pointed 30 degrees left of centerline, I pictured my T-2 sunk up to its wings in mud and contemplated one thought. How would I explain this mess to my skipper?

Luck was on my side. The runway had a high spot in it, and we hit a dry patch. The Buckeye straightened out, decelerated, and I managed to get it to taxi speed. Whew! What a save!

After clearing the duty, I switched to Ground and taxied to parking. I couldn't help noticing the puddles of standing water. My heart pounded in my chest. To this point, nothing had been said in the cockpit. Not until I had almost shut down did my student speak.

"Wow, that was interesting," he said.

Got to Worry

"No kidding," I replied, which is aviatoresque for, "We almost crashed this thing!"

As I updated the weather for the final leg of our trip, I asked the forecaster how much rain they had received. He said that the storm that had just passed through dumped two inches in 20 minutes. Had I known this little tidbit of information, I may have elected to trap, or at least have asked about standing water. Tower never offered it, and I never asked. All I knew was that a C-5 pilot reported braking action good. Next time, I'll

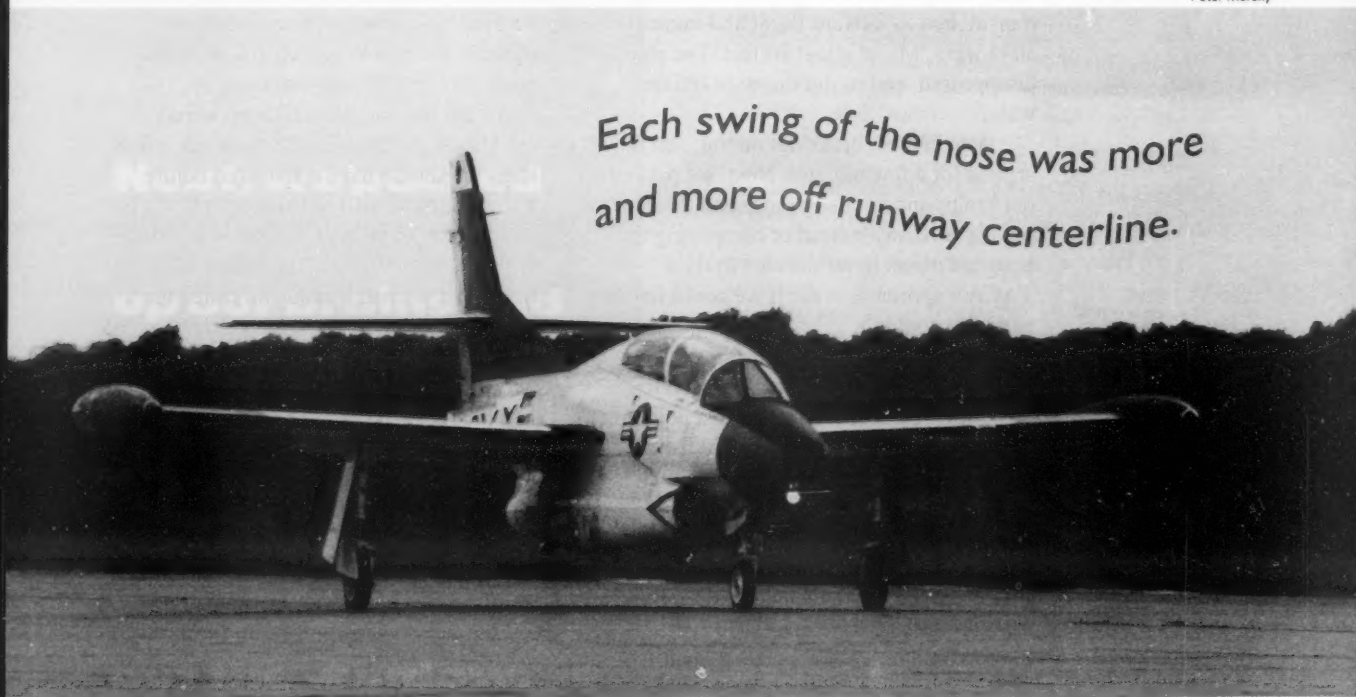
consider the source. No, not because he was an Air Force guy, but because he was flying one of the world's largest aircraft. What was good for him was lousy for me. ◀

At the time of this incident, LCdr. Tack was an instructor with VT-9. He flew with VAQ-131, and is currently assigned to VAQ-132.

A runway condition reading (RCR) is a much more precise gauge of braking action. Braking action reports tend to be judgmental and differentiate between aircraft, unless a similar aircraft made the report and there was no standing water. Assume the worst.
—Ed.

Peter Mersky

Each swing of the nose was more
and more off runway centerline.



Foggy Interruptus

By Lt. Robert E. Kalin, Jr.

Midnight off the North Carolina coast. We readied our SH-2F for an ASW exercise. We briefed the mission objectives in CIC, then did the NATOPS brief in the hangar before heading toward the aircraft.

There was no moon, but from the flight deck, we could see the stars. We turned the Seasprite up and the HAC lifted off. We transitioned to forward flight and immediately went IMC at about 40 feet. The ship disappeared, and so did the stars and the water.

We climbed, broke out on top, and flew around for a few minutes. Next, we packed up our brains and common sense and threw them out the window. Instead of completing the assigned mission, we decided to fly a TACAN approach to see if we could find the ship. We couldn't.

Without further assessing the situation, we decided to make a radar approach to the ship, having our AW direct us to a point one-quarter mile behind the ship at 50 feet. We reached this point, and the HAC calmly asked me if I had the ship in sight.

"No," I said.

"What do you mean, 'No'!" he asked, looking at me, and causing the aircraft to sink 10 more feet.

"Wait!" I urged. "There's a light. Keep going."

He drove straight in, flying to a point right off the starboard side of the flight deck. He then got a bad case of vertigo and started descending toward the water.

"Power! Power!" I called as the nets came up to our eye level. He yanked on the collective and plopped us down onto the deck. While not exactly on lineup (who are we kidding—nowhere near lineup), we signaled for chocks and chains, then shut down. We unstrapped just as the ship drove out of the fog and the stars reappeared.

Hindsight being 20-20, there are a few ideas we should have considered before trying the most difficult approach to the back of a frigate. First, the US coast was only 50 nm away with the airports calling VMC. Second, if we had waited and called the ship's bridge, they could have driven out of the fog. Third, there were six other frigates within 30nm which were calling VMC. We had the fuel and time to pick a better landing site. By making a hasty decision to get aboard, we nearly killed ourselves. ◀

Lt. Kalin flew with HSL-34, and is currently assigned to HSL-46.

Letters

Re: "And Now, One for the Homo Folks!" (Apr '94)

Letter from Cdr. Jay Pettit and
Comment by LCdr. John Burgess (Jul '94)

MCAS Yuma—If you are NVG-qualified and current, and it's a night mission, NVGs are appropriate.

Naval aviation (including the Marines) is not in the dark ages when it comes to NVGs as Cdr. Pettit and LCdr. Burgess wrote. Cdr. Pettit said that he was "amazed to find that we are still in the dark ages *restricting the use of NVGs for routine operations.*" (My italics)

LCdr. Burgess replied, "Currently, no one supports using NVDs for routine, non-tactical personnel transport. This mission is safest when flown under positive control within the IFR structure."

We realize the benefits of NVGs (including increase SA, comfort level, and enhanced navigational ability) whether the mission is tactical or not. There are many situations and missions where using the IFR structure isn't practical or feasible. NVGs can only facilitate accomplishing the mission in these cases. Even when flying under positive control within the IFR structure, why preclude the use of NVGs? There are still potential benefits by using goggles, such as enhanced navigation capability (at any altitude according to the fixed-wingers), increased SA, and the ability to see and avoid, which is the responsibility of the aviator, even under positive control.

The Marine Corps has addressed NVG training and proficiency, as well as weather and illumination requirements, for years in their Training and Readiness (T&R) Manuals, Volumes 1 through 3.

NVGs are *not* useless in rain, fog and clouds. LCdr. Burgess mentions a USMC CH-53E crew, lost during an NVG mission in low ceilings and fog. NVGs were *not* a contributing factor to this mishap. This was a situation where conditions (weather, over-water) exceeded NVG capabilities.

NVG usefulness will be dictated by the mission, environmental conditions, including the amount of rain, fog and clouds, illumination, terrain, and target contrasts. Airspeed, altitude, and the mission itself may need to be adjusted (or aborted) based on environmental conditions in the operating area. Pilots may have to transition to instrument flight if conditions really deteriorate. Proper pre-flight planning is the key.

LCdr. Donnie Plombon

MAWTS-1 Aeromedical Safety Officer

**Next, we packed
up our brains and
common sense
and threw them
out the window.**

Approach welcomes letters from its readers. All letters should be signed though names will be withheld on request. Address: *Approach* Editor, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399. Views expressed are those of the writers and do not imply endorsement by the Naval Safety Center.

Kudos to All and to All a Good Write!

The time has come in our publication cycle to pat some backs. Check the inside back cover for our annual layout of contributor award winners. We have a shared command writing award, between previous winner VA-52 and newcomer VFA-195. Lt. David Wilfong, now with VT-10, earned Contributor of the Year for his long-lived, useful discussion of E-2 single-engine procedures. Long-time photographic contributor Capt. Rick Mullen, USMCR, gained our top photographer designation.

These folks represent our readership, whose contributions are *Approach's* lifeblood. Lt. Wilfong didn't launch into a potentially dangerous situation so that he could appear in the magazine. But he thought enough about his and his crew's experience, and cared enough about his community, to write the story and send it to us. The discussion it generated, centering around E-2 operations and NATOPS in general, was one of the best such cycles I have seen. There might have been a few irate readers, but I'd bet that there was also plenty of ready-room conversation and research out there.

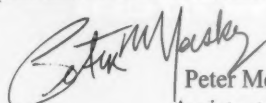
Lt. John Burge's unusual experience with hair styling raised several chuckles and appreciative comments. One reader (actually another editor of a well-known quarterly) called the VA-196 author's "Helmet Fires" one of the best stories he had seen in *Approach*.

Lt. Brennan and his skipper didn't anticipate having two of their Herk's engines pack up over some of this

planet's most inhospitable terrain, but they and their crew were ready to take on this problem and ultimately recover safely. Afterward, the desire to share this experience resulted in an unusual, and instructive, story. Having on-the-spot photography was a nice addition, too.

And speaking of photos, Capt. Mullen, and his runnerup, Mr. Ted Carlson, represent that graphic side of our production equation. No one likes to look at page after page of text. We have to constantly renew our files and find more pictures—good photos—to run with the stories. We depend on photographers almost as much as on the authors of the stories we run.

Finally, and somewhat inversely, we come to the two co-winners of the command writing award, VA-52 and VFA-195. It was close. Other squadrons had nearly as good a record, and we all benefitted from their eager dedication and skill. However, there are a few communities from whom I hope to see a little more participation. Marine Corps aviation has been represented mainly by the rotary-wing group, but we know you guys fly jets. Japanese magazines run pictures of Hornets and Prowlers. So, you can't hide. Harrier guys, we know you're there, too. BZ nominations are always welcome, but how about a solid feature article or two? Any questions? Call us to discuss it.


Peter Mersky
Assistant Editor

approach

Contributor Awards

We are pleased to announce the winners of the *Approach* Contributor Awards for 1994. Contributions over the past year have been exceptional, and choosing winners in each category was difficult. All the authors and photographers who were published contributed to the success of the magazine and to aviation safety.

Thanks to everyone who took time to write an article or shoot a photo, and send them to us, even if we couldn't use or find a spot for them. The Naval Safety Center and *Approach* congratulate this year's winners.



Command Writing Award (Co-Winners)

VA-52
VFA-195



Contributor of the Year

Lt. David Wilfong
VT-10

Honorable Mention

LCdr. Mark Sherberger
NAS Norfolk



Article of the Year

Lt. John Burge
VA-196
"Helmet Fire" (September-October)

Honorable Mention

Lt. Mike Brennan
VQ-4
"Two Engines Out Over Antarctica" (December)



Photographer of the Year

Capt. Rick Mullen, USMCR
HMH-769

Honorable Mention

Ted Carlson, FOTODYNAMICS
Mission Viejo, CA

Sure
you're
fit to fly,
but are
you fit to
survive?



